

MICHIGAN FARMER

AND STATE JOURNAL OF AGRICULTURE.

The Only Agricultural and Live Stock Journal in the State.

VOL. XXXI.
No 10.

DETROIT, SATURDAY, MARCH 6, 1897.

PRICE, 5 CENTS.
\$1 per Year.

FARM NOTES.

BEES ON THE FARM.

As long ago as the writer can remember, the only bees kept on our farm were of the "bumble" variety. They were "general purpose" animals, in my opinion, though they sometimes proved their ability as specialists when they used to sting me on purpose, as I verily believed for some time after each application.

Fifteen or twenty years ago there were many swarms of bees scattered about on various farms in the neighborhood. Now I do not know of a single swarm within a radius of several miles around us.

During my boyhood days I used to find "bumble bees' nests" in an abnormally high stage of activity everywhere on the farm. There was hardly a day from June to October that I did not find a nest, fully organized and armed to the teeth (?), and evidently waiting for the proverbial "chip on the shoulder" to be knocked off, when a score or more of Gatling guns were given the command to "fire away."

During these good old times when bees of all kinds were so common, we used to grow enormous crops of clover of all varieties common to this latitude. Patches of buckwheat were to be seen on many farms after harvest, and for several months the air was heavily laden with perfume.

During the last few years less clover has been grown, on account of drouths and insect pests, very little buckwheat is sown anywhere, and I actually saw less than a dozen bumble bees on my farm last summer. There are no swarms of honey bees in this whole neighborhood, and it seems to me that it is time to effect a change, providing it is within our power to do so in a practical manner.

I know that the consumption of honey in this section of the country is ridiculously small, although many of our brother farmers say they like honey and would be glad to buy more or less, if it could be found, and at a reasonable price. Both comb and extracted honey is very scarce at Climax, and still the price is very reasonable.

Now, why could not some of us kept just a swarm or two of honey bees for the purpose of securing, not only honey enough for home consumption on the farm, but also assisting in securing the fertilization of early spring and summer bloom on the farms?

Would it not pay the average farmer to find out just how to secure and care for a limited number of swarms of bees, and then keep a swarm or two? I know nothing about apiarian methods, and make this suggestion to stir up some discussion along this line. I always read what our good friend Hilton says about bees, and was much interested in his article, "Who should keep bees," in the Jan. 23d issue of the FARMER.

Remember, I am not advocating a "Bee Boom," nor advising every farmer to stock up with bees, but I do not see why it would not pay many of us to keep "a swarm or two" for home consumption of honey, and to assist in the fertilization of the various blossom-producing products of the farm.

All kinds of bees are becoming very scarce in this locality, and we all know that it is not good for man (farmers) to live alone; and a good "helpmeet" combination is made up of good wives, bees and honey. We farmers, both married and single, should all meditate over this possible, happy and easily attainable condition, and write the FARMER our opinion of the matter, after mature deliberation.

FUEL VALUE OF CORN.

Several times I have been asked whether

it would pay farmers to burn corn in this section of the country, at present prices, when either wood or coal, or both, must be purchased.

This is a question I could not answer from any experience of my own. However, I have frequently stated this winter that corn was too dear to burn for fuel, even when one had an enormous crop, with no possible hope of feeding it out during the coming year.

Corn is worth here about 18 cents "in the ear"; wood, \$1.50 to \$2.00 per cord; anthracite coal, \$6.75 per ton. It is estimated in the western states that corn is worth "somewhere about" 14 cents for use as fuel.

We have tried the experiment of burning ear corn and find it gives out a great deal of heat. If put into a tight stove, on a good bed of coals, and the stove kept well filled, the dampers may be closed and the fire and heat will hold out for a much longer time than one would naturally suppose.

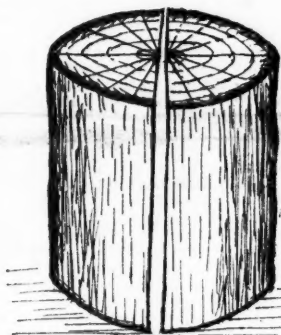


FIG. A

However, I shall not burn corn for fuel, though I have a large crop on hand and am obliged to buy both wood and coal. I "figure" it would pay better to sell the corn, or exchange it for coal and wood.

The Nebraska Experiment Station has made a very careful test of "The Fuel Value of Corn." A bulletin on the subject says:

The present abundance of corn and its low price has caused much speculation as to its fuel value. Whether it would pay to raise corn for fuel is a question not contemplated in this investigation, but the interests of the large number of people living in the region of cheap corn call for the determination of its most profitable use after it is upon the market.

To make the test, a good grade of yellow dent corn, on the ear, of this year's crop, and not thoroughly dry, was burned under a boiler and the amount of water evaporated by the burning of a known quantity of corn was noted. The test lasted nine and one-half hours, and 5,232 lbs. of corn and cob were consumed. Next day, the same boiler was heated with screened nut coal for five hours, burning 1,888 lbs. of coal, and the amount of water evaporated was recorded.

The data thus obtained shows that one pound of coal evaporated 1.9 times as much water as one pound of corn. In other words, 1.9 times as much heat was liberated in burning one pound of coal as in burning one pound of corn.

The coal used cost at Lincoln \$6.65 per ton. With coal selling at this price, and worth 1.9 as much for fuel as an equal weight of corn, the fuel value of the latter would be \$3.50 per ton, or 14.25 cents per bushel.

If this quality of coal were selling at less than \$6.50, and corn were bringing twelve cents, it would not pay to burn corn, while coal must sell as low as \$5.41 per ton to be as cheap fuel as corn at ten cents per bushel. A very complete and thorough investigation of this subject is now being conducted at the university.

BEST METHOD OF HEATING THE HOUSE.

What is the best method of heating a good-sized farm house? During the last four months I have been in many farm homes,

and find a great difference of opinion expressed regarding this question.

For my own home I use a large size base burner coal stove. This easily warms four good-sized rooms, as well as one large chamber room. Two scuttles of coal per day will run the stove in ordinary winter weather. But when all the rooms are open in very cold weather we need nearly twice this amount of coal.

I have been in hundreds of houses heated by hot-air furnaces. Some of these work well, while others are worthless in extremely cold weather. From all that I have seen of various methods of heating the whole house, I am inclined to believe that steam heat or hot water furnishes the best system. This costs more in the installation of the "plant," but for the purpose of heating all the rooms of a large house, I think hot water or steam preferable. What do our readers say?

BOOK KNOWLEDGE ON THE FARM.
This is really needed on almost any farm

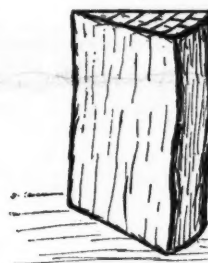


FIG. B

in these times, much more than in the good old days when the virgin soil produced bountiful crops which were quickly taken at a largely remunerative price.

I have said before that, in these days, it behooves every farmer to keep up and even improve the fertility of his soil. He must also produce all he can on the farm as cheaply as possible.

To do this properly and in a practical manner the farmer should know something of agricultural physics. This will give him a knowledge of the soil, its constituents, the elements necessary to germinate the seed, grow and mature the crops he requires for his special purpose.

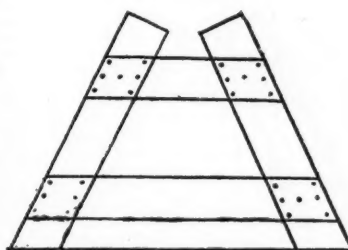


FIG. C

The better the farmer understands his soil, how to treat it to acquire and improve all available fertility, the better crops he can grow, and more cheaply, too, all other conditions being equal. We know of numerous instances in which men thus educated have taken poor farms, badly run down, and by a knowledge of the necessary conditions to be taken, eventually brought the land up to a high degree of fertility. The "know how" pays just as well in this line of maintaining and improving soil fer-

tility and crop production, at least cost, as in any other avocation.

A knowledge of agricultural physics also enables the farmer to properly treat land deficient in, or too full of, moisture so as to obtain best results. He will better understand how to grow crops to the best advantage in times of extreme drouth. This he will do with a proper control of moisture, preserving it in times of drouth and draining it away when there is an excess in the surface soil.

This knowledge also helps the farmer to best understand and practically apply right methods in soil tillage and surface culture for various crops in order to secure maximum results.

Feb. 25, 1897.

J. H. BROWN.

For the Michigan Farmer.

CUTTING WOOD.

As this is the time of year when most farmers are working in the woods during the few hours they have remaining after doing their chores, I will give my views and experience as a wood cutter.

I do not claim to be an expert in this art but class myself among the thirdly's and fourthly's, for there is no work on the farm that I detest like cutting wood. In fact all other work is a pleasure but (like George Washington) I'm not going to lie about it.

The timber we have to cut is beech, and dead at that. We experienced some difficulty in splitting this dozy wood, as it would chip off, leaving an odd-shaped block, besides making the other portion of the stick worthless for stove wood.

So after splitting several cords we hit upon a plan which was not only a saving of this sap wood which chipped off, but facilitated the splitting to a certain extent.

We found that by splitting a block through the center, then marking it out with our eye, something like Fig. A, then splitting into these wedge-shaped slabs, striking the bit of the ax into the heart or solid part, that the decaying part would adhere to the good.

The slabs in Figure B were five or six inches wide on the bark side. Commencing at the heart of this slab, and working toward the outside, the first stick can be quite wide, as the slab is thin at this edge. The next one must be a little narrower, and so on till you come to the dozy part, being sure to leave a strip of good on the poor. Now turn this a quarter way over and split as in Fig. B.

Some men seem to enjoy sawing with the tree down on the ground, but I do not. We cut a good, straight pole for a lever—ironwood, if we can find it—never cutting a maple, as I would just as soon cut down an apple tree. While we do not make maple sugar, yet we expect to sometime.

By nailing an old horseshoe close to the end of a pole, with the heel calks toward the end, the log will never slip sideways, or a pole draw out from under the log. We have our next year's wood cut now, Jan. 15.

HILLSDALE CO.

E. F. BROWN.

For the Michigan Farmer.

POWER WINDMILL ON THE FARM.

We have a power mill with which we run a feed cutter, feed grinder, corn sheller and pump.

The pump is across the road from the mill. It is run with wires which are worked by triangles.

There is one thing that is not very desirable in running a pump with a power mill, that is you can not run it with low winds, which often occur in the summer.

For feed cutting you can run during the

roughest days in the winter, when it is not very good weather to be outside. The feed grinder you can run when you are doing your chores. It thus costs you but little to grind your feed.

We have had our mill for thirteen years, and would not part with it for a great deal.

OAKLAND CO.

OLIN J. DUNLOP.

[The more we see of these power mills in actual working order, in various portions of the country, the better we like them.

Windmill power is bound to become more universally utilized for various purposes on the farm. It is now used in several places for running a dynamo for electric lighting. As soon as storage batteries are improved and cheapened in cost, we shall see electric lights become quite common in farm buildings.—Ed.]

For the Michigan Farmer.

WHEAT GROWING IN ARENAC COUNTY.

The growing of wheat in this county commenced about the year 1870.

Chapman Bros. had some seed sent from Lapeer county to their camp near the Rifle River, known as the Chapman farm, but for want of time did not get it sown. They, however, furnished the seed to L. P. Daniels, George Turner and Jacob Feder-spell, they sowing it the next year, after harvesting the crop.

They were obliged to smooth off a plat of clay, and threshed it with a flail and cleaned it by pouring it in the wind. They, however, received the compliment of marketing the best wheat at Bay City that year and received \$1.65 per bushel for it. This was considerably more than the market price at the time.

It soon became manifest that wheat could be successfully grown in this county. Several farmers were soon chopping off fallows, burning and logging off the timber, then passing over the ground with a shovel plow so as to get it "dirty." Wheat was sown among the stumps and harrowed in with a spring-tooth harrow. This tool has a remarkable faculty of slipping over roots and immediately catching hold of the ground so as to cover up the seed fairly well.

Very good yields were often taken from such new ground. I have thought such crops have often worked an injury to the producers by making them confident of growing wheat with any kind of culture.

I have noticed, in many instances, farmers would commence to plow a sod or stubble ground long after the proper time to sow wheat, perhaps finding the ground so dry and hard that it was almost impossible to plow it at all, let alone doing the job in a workmanlike manner. The result was, scarcely enough wheat was harvested to pay for the expense of planting.

I have also noticed some to be so anxious to get in a large acreage that the whole crop was neglected and a dismal failure was the result. I would recommend in such cases for them to put the work on only so much land as they could properly prepare and sow in good time, say not later than the middle of September. I am sure in nearly all cases they would reap much better rewards for their labor than they do in undertaking too much.

I find another matter for comment is the carelessness in preparing seed. Many fields of wheat are mixed with rye, cockle and chaff, in such quantities that buyers are obliged to reduce prices to such an extent as to leave no profit at all. I have been surprised to hear farmers say, upon looking at seed they were sowing, and finding a grain of foul seed in a handful, that there was scarcely anything in it but wheat, seeming to forget that tares increase faster than wheat.

A few hints on preparing ground for wheat may not be amiss. On land that is knolly, or has just been cleared of stumps, a thorough summer fallowing is the best plan to follow. After such ground has been well prepared, and has grown hay, then turn down the sod long enough to fine and properly settle it before sowing. Sometimes peas sown on sod may be taken off and the surface worked enough to fit it, when a good crop may be cheaply grown.

I do not favor following oats or barley immediately with wheat, as such crops exhaust the land too much. It is nearly impossible for us to properly prepare the ground so as to insure a good growth in the fall, and thus enable the plant to stand the winter.

The first wheat grown in this county was Michigan Bronze, which was soon followed by Clawson, White Russian, Martin's Amber, Michigan Amber, Red Clawson, Winter Fife and Surprise. Of the above named, Clawson seems to have been the favorite. I had a small quantity of Dawson's Golden Chaff sent me from the Agricultural College to test. It has done fairly well, so far, yielding 33 bushels per acre last year. This wheat was distributed for seed in about a dozen counties in this State last fall. It seems to be hardy, early and a good yielder.

ARENAC CO.

PETER GILBERT.

[We spent one day at friend Gilbert's recently. He has a large farm, one of the best in that section, and has made wheat growing a success. We walked back over a portion of the farm, as the snow was but six or eight inches deep, and were surprised at the immense growth of wheat stubble which produced last season's crop.

To the editor this seemed like a new country, and it is, compared with the southern portion of the State. What our friend has to say about the kind and preparation of a seed bed may not harmonize with the views of some of us in the southern counties, but, for the conditions in friend Gilbert's section, his method could not be improved upon.—Ed.]

For the Michigan Farmer.

SUGGESTIONS ABOUT ICE HOUSES.

In reply to request for articles on ice house construction, as I have had as a carpenter, some experience in that line, perhaps a few results of my experience may not come amiss.

First, ice can be kept for an indefinite time by simply keeping it covered in any manner that shall exclude the warm air—a pile of sawdust, tan bark or straw will do, but won't look very pretty, or be convenient at all times. And I find that even the farmer most always likes to have his surroundings look as well as his neighbor's do.

The construction of an ice house of sufficient capacity for an ordinary small dairy farm of a dozen cows is a very simple and inexpensive job, requiring no great skill. All work, however, should be done in a workmanlike manner.

The first and most important step is to secure good drainage. The next is a good foundation wall that shall prevent the entrance of air. Then put up your building of any required size, (to fit your foundation), in usual balloon style, using for studding 2x6 or 2x8 stuff; set 32 inches apart; cut in 2x4 girts, which nail flush with outer edge of studs; board outside perpendicular and batten cracks; make as tight as possible, (building paper on first is a great help.)

Inside, board horizontally with any good straight-edged lumber. It will not be necessary to fill the space between walls. Put on a roof that won't leak and has quite a wide projection. In each gable, as high as possible, put a ventilator of any kind that will give a circulation of air. The gables need not be double walls.

The lower part of the house should be filled from one to two feet with anything that will keep the ice from the ground and make a level bed for it. Ice should be packed as closely in the house as it grew in the pond. An extra hand in filling, to see that all crevices are filled with finely pounded ice, and that each layer is made level that the next may lie solidly upon it, will pay.

If I were to build an ice house for an average farmer, after my own plans, I should build 14x24 outside, and at one end use from 8 to 10 feet of the length of the building for a cooling room.

This room should be constructed in the same manner as the balance of the building, except the floor, ceiling and doors, which should be double. In the ceiling should be an ice box of galvanized iron, coming in contact with the air of the room, and which could be covered to prevent too rapid melting of ice. Doors to cooler should fit closely, (one opening in and one outward.)

Door for filling ice house should be in end opposite cooler. I would make outside doors in two sections, upper and lower, to extend the whole height of walls, or as high as the walls are double, for inside. Use short, close-fitting boards, placed horizontally, and put in position as fast as the house is filled.

In packing, leave a space of about one foot for sawdust or spent tan bark, which should be well packed as the work of filling proceeds.

E. S.

ALLEGAN CO.

[Friend E. S. gives an excellent plan for ice house construction. Now we should be pleased to have him furnish the FARMER with plans of a small cooling room for ordinary farm use. This might be of great value to many of our readers who are thinking of building a small cooling room, attached to the ice house, dairy room or kitchen.—Ed.]

For the Michigan Farmer.

EVOLUTION IN POTATO CULTURE.

The inconstancy of seasons has but little of the depressing effect on the producers in our country as compared with the continual lowering of values that has persistently followed almost all lines of agricultural production. This continued scourge of low prices has a demoralizing effect on the producer, especially noticeable in two ways and very opposite in result. With some discouragement first, and then careless methods, resulting in fixed habits, and even shiftlessness in some cases. The other side of the question is the bright side, however, and we find that through necessity many are forced to resort to different methods of production, new devices for lowering the cost of producing or increasing yields with the same or less labor employed. Improved methods, more productive and better seeds, profitable stock intelligently fed, and so through the list of farm work.

On account of varied seasons, drouths, floods and insects, the inscrutable ways nature takes to develop the resources of the farmer, oftentimes simple truths are undiscovered for years. But now "He who runs may read the FARMER"; readers, I believe will pardon that addition, as I believe many half-column articles from practical farmers contain the result of years of experience and investigation. Successful methods change with location, and difference of soil makes thorough investigation necessary or loss will surely follow, and especially so to the producer of potatoes. Great losses occur annually to growers on heavy soil following the advice of producers on sandy loam or muck. Most emphatically it may be said that the most profitable manner or system of potato culture on sandy and muck soils will not give satisfaction to the producer on clay soils or upland. The reverse of this, while more expensive, produces good crops on sand or muck.

Reduction of the cost of production

means much when applied to the potato crop, and the practical solution of this problem depends, without question, on the best use of the soil you have for that purpose. This will practically divide the work into two systems, determined by the word machinery, one method involving an intensive culture and much hand labor, and the other mainly dependent on machinery. In this article we will consider the latter only, and to growers who expect to plant ten acres or more I would say that your soil must be potato land, sufficiently free from clay to be easily worked, reasonably loose and friable. To begin with planting, those who have plenty of time and wish to cultivate both ways, the hand planter is found to be very convenient and profitable by many, enabling the grower to dispense with the extra hands, doing the work with exactness, satisfaction and profit. Of these, the tube planter will be found most convenient, and the outlay is reasonable. The cutting of the seed potatoes is something that, on account of accuracy, I prefer having done by hand, and in growing even twenty acres I should adhere to this practice, at least while planting in hills.

If planting in drills, fairly good results can be secured by the use of a machine cutter, especially so if you use for planting a variety that will not cut too many eyes to the piece; two or three eyes are sufficient in any case for drill planting. Now, while the drill system has many objectionable features, it no doubt will continue to increase its acreage as the present machinery is adapted best to this method and without question new inventions will be along this line. In drill planting, some patent planter will do more accurate work with less expense and do it better than any number of men that can be employed. With your seed cut ready for planting and in crates or bags, you can go to the field alone and plant all the ground your team will walk over, and, compared to hand labor, do the work of ten or fifteen men and do it better, planting any distance apart from thirteen to twenty-six inches as you desire, at any depth from two to eight inches, covering properly as deep as you may wish, and ridging up if desired, at one operation.

The rows can be spaced by the planter. This machine will work as well on ground that is quite stony as a plow, with less draft and certainly no more wear and less liability of breakage. This machine leaves the soil in such a condition, and the seed is planted in such a thorough way that it makes possible the practical use of more labor saving devices in the culture of drilled potatoes. A float can soon be made, if you have not one ready for such purposes, that will make an easy day's work of twenty acres. If soil is full of weed seed the float should be used at the first appearance and followed by a weeder or spike-toothed harrow just before the potatoes begin to come up; then repeat the dragging when some of the tops are two inches high, crossing the rows. Just a sufficient amount of this work should be done up to this time to destroy the weeds, and no more. From this time on cultivators will be most satisfactory.

Leaving the cultivation here, we come to the bug question, as they are on hand by this time. The grower of fifteen acres or more will find economy in using an adjustable wheel sprayer, one that will cover at least four rows. Sprayers are adapted to this manner or system of planting and can be used to great advantage on large areas, saving time and labor, and making possible the safety of the crop.

Now as to the matter of digging the crop. I have been experimenting for years with one, two and four-horse diggers, cultivators, drags, potato hillers, shovel plows, etc., and am waiting to try something more. I have it from good authority that a digger will be offered this season that will do the work with satisfaction and profit. Some diggers are giving satisfaction in certain localities.

Where the right kind of help can be secured it is an open question as to the profitable use of a potato digger. In the meantime a medium depth of planting will facilitate the matter of digging, and I mean by this a depth that will allow the use of a spike-tooth harrow without disturbing the seed. This will be found to give the most vigorous growth and stand the extremes of seasons in the most perfect manner.

W. E. IMES.

For the Michigan Farmer.

SOWING CLOVER SEED.

Editor Brown, in the last (Feb. 13th) issue of the FARMER writes in regard to the proper time for sowing clover seed, but does not give directions for doing the work and getting the seed evenly distributed over the ground.

My plan is as follows: I go to the field with a seed sower (advertised in the FARMER), a quart measure, and as much seed as I can conveniently carry. We generally aim to sow about four quarts to the acre, and the first thing in order is to get the sower so regulated as to sow at this rate.

I do not use stakes in sowing, but follow every alternate wheel mark of the grain drill. The common grain drill sows a strip about five feet wide at a "through," or about ten feet to the "round." Therefore, by following every other wheel mark, I sow about ten feet to the "through" or twenty feet to the "round."

I start in on second wheel mark, with say two quarts of seed in the sower. If I don't know the length (or width, as the case may be) of the field, I count the panels of fence the first "through." Should I find the distance to be, say 32 rods, it will be evident that in going one "round" I will sow just 40 rods, or one-fourth of an acre, as the length of this strip (32 rods) multiplied by the width (20 feet or about 1 1/4 rods) equals this area. Therefore in going

one "round" with the seed sower, I cover one-fourth acre of ground and should apply one quart of seed.

In going a few rounds I get the sower so adjusted as to sow the desired quantity per round, and knowing the approximate quantity required per round to enable me to apply the desired amount per acre, makes it unnecessary to do much guessing or to "go it blindly" as to the amount of seed being applied.

I never pay any attention to the manufacturer's printed directions accompanying the sower. I think about ten feet to the "through," or twenty feet to the "round," is as wide a strip as it is policy to attempt to sow with this sower.

This has been my method of sowing clover seed for the past six years. I confess that I can not make the speed recorded some years ago by Mr. T. B. Terry, the well-known agricultural writer, who reported having sown thirty-six acres "before breakfast," nor even come up to Editor Brown's record given in the last issue of the FARMER.

FRANK LESLIE.

[We purposely refrained from giving specific directions regarding the actual work of sowing, as we wished to incite our brother farmers to write the FARMER concerning their methods. Friend Leslie is helping the good work along, and the FARMER wants others to fall in line and give their experience.

Our seed sower has a cone-shaped, flanged funnel, projecting laterally out in front of the machine. It runs in one direction, at a very high rate of speed. Consequently we sow from 18 to 20 feet, or six paces, at each passage or "through," making 12 paces at a "round." It is the same machine that our friend Terry uses, and accounts for the extra large amount of ground covered in a very short time.

Our grain drill is an eleven-hoe tooth, each of the hoes seven inches apart. We pay no attention to the wheel marks, in fact, could not find them. No wheel marks are visible after the wheat is sown, and all drill marks are exactly seven inches apart. We pace off the distance required and follow a certain drill mark. This is very easily done, and no stakes are required.

Our machine sows very evenly, and is adjusted according to the length of pace the operator naturally takes. We make one turn of the crank or handle to each downward step of both right and left foot.

The best time to sow is when there is no wind, of course. But we can sow with this machine in quite a breeze, providing we travel directly toward or with the wind. We never tried to sow 36 acres before breakfast. We have no doubt friend Terry has sown 12 acres before breakfast, for we have heard him say so, and can do it ourselves. We never heard of the "36 acres before breakfast" before.—Ed.]

For the Michigan Farmer.

SOWING RED TOP ON MUCK LAND.

Will you please inform me through the FARMER when is the best time to sow red top on muck, and how much to sow to the acre of fancy, re-cleaned seed? Can I sow with oats in the spring and get a good stand?

I have a piece of marsh ground which I wish to seed to red top the coming season, and would like to have the readers of the FARMER give their experience in sowing the same.

FRED. J. ROWLEY.

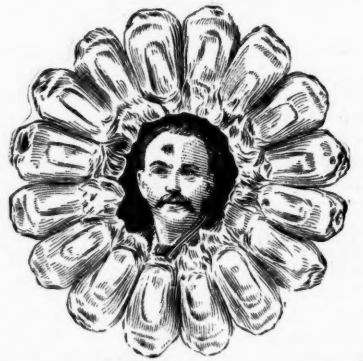
SHIAWASSEE CO.

I would sow seed of red top in the spring, summer, in September or October.

If the seed is extra clean and free from chaff, sow a pound and a half or two pounds to the acre. Less would answer if it were possible to sow the seeds evenly. But they are so small that many must fall or fall too near each other, while others are too far apart.

The fewer oats sown with the red top the better for the red top.

Michigan Experiment Station. W. J. BEAL.



A Big Corn Crop.

Last spring \$500.00 were offered in prizes for the largest crop of corn grown on one acre in any part of the United States. Twenty-three different varieties of corn entered into the competition, but it is a singular fact that the largest crops reported were of the Iowa Silver Mine Corn, a new variety which was introduced last year. It was an Iowa farmer who won the first prize on a crop of 802 bushels and 50 pounds of corn in the ear, which, when shelled, amounted to 215 bushels. In Arkansas this same variety yielded 188 bushels, in Nebraska and Ohio 135 bushels, and in Texas 128 bushels. These yields were attested to as having been grown on exactly one acre of ground. The above illustration represents a section of an ear of this variety of corn, greatly reduced in size, and also shows the picture of the prize winner. For more full information in regard to this most wonderfully large yield, address the Iowa Seed Co., Des Moines, Iowa, who will send a copy of their large illustrated catalogue to all who mention this paper when writing to them.

Live Stock.

THE HOG FOR MICHIGAN.

The course of the live hog and pork product markets the past six months gives emphasis to what we have said before, both in the FARMER and at meetings of live stock associations, regarding the class of hogs best suited for Michigan farms. There has not been a day in the past year when the smooth, nicely finished light hog, rather rangy and with good hams and shoulders, has not sold from 5 to 10 cents per hundred pounds higher than the heavy weight hog. It seems to us that this condition of affairs is entirely favorable to the peculiarities of Michigan's agriculture. Outside of the fruit-belt Michigan has no great specialty. Her soil and climate pre-eminently fit her for mixed husbandry, in which grain growing, stock raising and dairying are all included. The State is not in the corn-belt, and her farmers will not, therefore, find it profitable to raise that cereal for market at the prices which rule three years out of five. But Michigan can, as a rule, grow all the corn necessary to supply her own requirements. Besides that her soil is well adapted for the production of wheat, oats, barley and rye, for root crops, beans and fruit. Her average production per acre of all these crops, for a period of ten years, places her ahead of any other one State. Each of these crops can either be fed as a whole, or its by-products utilized for stock-feeding purposes. The hogs grown upon them will not have the amount of lard they would if fed largely, or entirely, upon corn, which is the rule in most of the states in the corn-belt. Michigan farmers, therefore, are in a most advantageous position for the production of the light hog, suitable for the bacon curer. It has the feed just adapted for that purpose, which will grow hogs with the streak of fat and streak of lean which is the desideratum of the bacon curer and the bacon eater. To produce such hogs means the escape of the farmers of the State from the intense competition of the corn States, where the big hog can be grown so much cheaper than in Michigan, and which now sells lower than any other class of hogs.

In producing the bacon hog we are not only utilizing all the by-products of the farm, of the cheese factories and creameries, the orchards, pastures and vegetable gardens, but we are growing the highest-priced hog, and the one that can be turned into cash every six months, instead of nine months or a year; and time is money in growing hogs as well as in everything else. Then there is no prospect of the market becoming so congested with prime light hogs as with heavy ones, for the reason that the market for bacon and hams is steadily enlarging, both at home and abroad. The American public is becoming a great consumer of bacon, but it requires good bacon. Then the foreign demand is steadily increasing. Look at these figures, taken from the official reports of the State Department:

	1896-7 lbs.	1895-6 lbs.
Exports bacon from July 1,		
'96 to Jan. 1, '97.....	277,653,157	269,006,282
Exports hams from July 1,		
'96 to Jan. 1, '97.....	91,343,957	68,063,085
Exports pork from July 1,		
'96 to Jan. 1, '97.....	37,682,998	46,666,885
Exports lard from July 1,		
'96 to Jan. 1, '97.....	286,066,781	309,522,031

In looking over these figures we find that the exports of bacon and hams increased, in the seven months reported above, from 337,669,367 lbs. in 1895-6, to 376,997,114 lbs. in 1896-7. At the same time the exports of barreled pork decreased from 46,666,885 in the same seven months in 1895-6, to 37,682,998 in 1896-7—a loss of 8,983,887 lbs., while hams and bacon increased 31,327,747 lbs. That is a great difference, and the chances favor its further increase in the future. It is true the decrease in the exports of lard of 23,455,247 lbs. for the seven months referred to is the result of a determination on the part of several European countries to discriminate against the American product, and the increased use of cotton-seed oil, a cheaper product, to replace lard in several foreign countries. But are these adverse conditions to the use of American lard likely to be overcome? We don't believe they will, and if not these two causes will tend to decrease the exports from year to year. Hence, we say, the future prospects for the hog raiser in this State depend upon his meeting the demand for a certain class of hog, and he should turn his attention to its production. It will require a well-bred hog as well as a well-fed hog, for it must have the feeding quality, the form, and the feed, or it will never reach the required standard.

Since the above was written we have received a report of the exports of bacon and pork for the week ending February 21st, and find them to be as follows for that week and the corresponding week last year:

	1897.	1896.
Bacon, lbs.....	15,866,000	11,052,000
Pork, lbs.....	1,069,000	1,346,000

These figures show a decrease in the exports of pork for that week this year as compared with last of 277,000 lbs., while bacon increased 4,814,000 lbs., showing that the demand for the latter is steadily increasing, while it is decreasing for the former.

"BROWN'S BRONCHIAL TROCHES" are a simple yet most effective remedy for Coughs, Hoarseness and Bronchial Troubles. Avoid imitations.

For the Michigan Farmer.

THE CARE OF BROOD SOWS.

We should like the advice of some practical and experienced hog raiser on the care, food for, previous to, and after farrowing, of sows; the condition they should be in at time of farrowing; and, in fact, we want all the information we can get on brood sows from time of breeding to the time of the weaning of pigs. We have about 15 brood sows that will farrow from April 1st to May 15th, and we want to know the best methods and all the details connected therewith. We have had very poor success in raising hogs thus far, our neighbors claiming our sows were too fat; the pigs, when they come, would seem to be strong and healthy, and could keep them for about a week; then every morning thereafter, I would find a dead pig until the very last one would be gone. The sows would lie on some, and others would die from other causes.

Most of our sows are large sows—mostly Poland-China. We have lost every one of our fall and winter pigs. Our pens seem to be plenty warm enough; in very cold weather, would fire the furnace.

This winter we are feeding our sows on swill, bran and water, and sometimes mix in boiled potatoes; also feed some potatoes raw. Do not feed an ear of corn, and still some of them seem to be fat.

Now, if you will kindly get us this desired information from some successful raiser, we shall greatly appreciate it; or if you will give us the information, shall be greatly obliged.

F. NEFF & SON.

MONTICELLO CO.

There is nothing in the rations mentioned which should affect the young pigs. It is very probable that the trouble comes from your sows being too closely confined, and thus becoming too fat. Exercise and the open air are necessary to the health and vigor of breeding animals. If your pens are warm, and the sows allowed to occupy them all the time, it would account for the trouble. The fat accumulated by animals kept in that way does not add to their strength. Fat is dead animal tissue. Strength comes from the development of muscle as the result of exertion. Muscular tissue is live flesh, and fat is dead because it has reached its limit of ripeness, and the next change is decay. We suggest you open up your house so it will not be so warm, compel your sows to take exercise by feeding them outside, except in very cold or wet weather; give them wood ashes and charcoal, with a very little salt mixed with them. If you have no other, use coal ashes. Put them in the yards where the sows can have access to them at all times. When the snow is out of the yards, scatter a little corn over the ground and let the sows hunt for it. Keep them active, and they will be healthy and vigorous. Will some of our breeders or hog raisers answer the inquiries of our correspondent?

TUBERCULOSIS IN FRANCE.

From our Paris Correspondent.

Tuberculosis and pleuro-pneumonia continue to reign permanently in the department of the Seine, that is to say, in Paris and the suburbs. The weak, the dangerous point in the situation is, that the measures for the eradication of the plagues are not effectually applied. It was only in July 1888 that tuberculosis was included in the code of cattle diseases. For the extension of the plague breeders are blamed for inattention in the selection of races, while others accuse the peasantry as the cause of the mischief, by their proverbial absence of ordinary care of their stock. Is the disease independent of both these presumed causes, and attributable to the tenacity and subtlety of the contagion itself, which defies the most rigorous sanitary measures? These measures the more they are enforced, the more they make the milk and meat industries difficult. But the public health must be protected; milk and meat are indispensable ailments for the dense centres of population; when they are impregnated with the disease germs, they unite the conditions most favorable for communicating the contagion to man.

At present it is established that there is no difference between the tuberculosis which affects man, and that which attacks animals. One can contract the infection from the other; it is in consuming the meat, butter and milk of diseased stock, that the bacilli, or infection spores, gain admission into our system. That is stomach tuberculosis; its lung form is contracted by respiring the air vitiated by the bacilli of the infection. This is the most general form in which man catches the infection from consumptive patients, and from not disinfecting the emissions of the latter—the expectorations etc. On some of the large dairy farms, tuberculosis has affected from 50 to 90 per cent of the cows; the disease is less general among the small holdings, and in some regions is absolutely unknown. The more aged the cows the greater will be the number diseased. The fetus is rarely attacked, proving that it is by contact, from ailments tainted, or rations infected, or impure air, that young animals imbibe or inhale the contagion-giving bacilli. The progress of tuberculosis is slow; it is only later on that its symptoms appear in young stock; in the earlier stages of the disease, the young stock can put up flesh and fat, as if in ordinary health. The disease will progress more rapidly if the animals be housed in narrow, ill-ventilated sheds,

than if living on pasturage. If further proof were required of the contagious character of tuberculosis, Professor Bang, of Copenhagen, has proved that the skim milk from some co-operative dairies communicates the disease to pigs, and hence the necessity to raise such milk to the boiling point to kill, not the bacilli—which a lower temperature destroys, and commonly called the pasteurization of milk—but their seeds or spores. Professor Butel, of Meaux, has shown that the blood of animals a long time affected with Phthisis, can communicate the malady. Hence, why in the inspection of meat for admission to the markets of Paris, the porters occasionally catch the disease, particularly if they have any hand-wounds.

Ought not heat destroy them in the case of meat also? Inspector Lullebeau is of the opinion that when meat is cooked till it changes from red to gray, no danger is to be apprehended. According to Veterinary Yong, of Leyden, it suffices to cook infected meat at 155 degrees Fah. during thirty minutes to destroy all disease germs; or, during some minutes at a temperature of 212 degrees. But the heat in the interior cooking of a joint rarely exceeds 140 degrees Fah., hence is inadequate. Not long ago a certain district of Paris became noted for its high death rate, due to the prevalence of enteric fever. At last the cause was discovered: The bakers employed well water to mix the flour, and the well water had been contaminated by cesspool leakings. The ordinary quatern loaf in Paris is sold by weight, and to secure the latter, the bread was designedly insufficiently baked; the center was almost dough still, although inspectors exist to check the fraud. Bacteriologists took portions of this heart part of the loaf, and reproduced billions upon billions of bacilli—the heat was not allowed to reach the interior. The plague was stayed, when the mills were shut down and the loaves better cooked.

In Hamburg there are immense cooking apparatuses for the steaming or roasting of those parts of a carcass of animals not directly attacked by tuberculosis; a whole ox, sheep, pig, etc., can be roasted in these ovens in a short time; when the flesh is thus sterilized, it is allowed to be sold as food. Steam is generally the agent employed. The abattoirs sell the flesh of diseased animals to be thus cooked, at the uniform price of 3/4d. per pound, live weight. In 1895, 750 carcasses of cattle, 1,000 pigs, flocks of sheep, in addition to horses and goats, were thus treated.

Since animals, as attested by experiments upon pigs, rabbits and cats, can catch the disease through the digestive organs, is it safe to consume the flesh, the milk, the butter of stock having the disease? It is here where the uncertainty commences. Boiling the milk certainly kills the disease germs.

The French cattle plague code is still vague. Professor Nocard, of the Lyons Veterinary College, interprets the law, that, save for slaughtering, there can be no legal sale of an animal suffering from tuberculosis, etc. It remains with the inspectors of the abattoirs to certify if the carcass can be delivered for consumption. The vendor of an animal, should the latter be declared diseased, must either take back the animal or retribute the price, no matter whether or not he was aware of the existence of the disease at the time of selling. If he sold the animal after the tuberculin test revealed the presence of the disease, he will be fined and imprisoned. If the buyer of a cow sees the animal condemned and sent to the abattoir, he will be allowed the usual compensation by the authorities, with right to all that is saleable of the carcass, but the vendor remains tied to make up the full purchase money. The Prefect of Police of Paris issued a decree, that when a case of contagion is recognized in a cow shed, all the animals must be submitted to the tuberculin test; if the inoculation reveals an immediate rise of 1 1/4 to 2 degrees of temperature, such stock must be kept apart, the sheds disinfected, and no fresh cows admitted till certified as having been tested. If no change in the animal's temperature follows the inoculation, the cow is regarded as healthy. Twice a week at the Lavillette cattle market, animals are tested by tuberculin, a few drops injected under the skin. Diseased animals, if kept separately, even in a boarded off part of the common byre, will be allowed a certain time to be fattened for butchery. Such is the state of the all-important question of tuberculosis, etc. in France.

A. E. & C. I. BURLING, of Mazon, Ill., write us that during the past few weeks the sales from their herd of Polled Durhams have been especially good, comprising some 18 head, which have gone to Iowa, Minnesota, Kansas, Missouri, Indiana and Illinois. They say the demand for these cattle was never as good as at present.

A GOOD THING FOR FARMERS AND FLOCK OWNERS.

Early last fall Mr. H. C. Ward, of Pontiac, embarked in the business of sheep feeding on a large scale. He wanted to test the question of whether sheep and lambs in ordinary condition could be purchased in the open market, put in prime condition, and sold at a profit in eastern markets, principally Buffalo. In carrying out his plans Mr. Ward made his first purchase of sheep in the southwest, and has added to the number at several times since. But he has also become a regular buyer in the Detroit market, taking some of the best lots of lambs and sheep each week, and paying good prices for them. His appearance in the market has been a great benefit to sellers, as he is a strong competitor of the butchers for all the stock he thinks suited to his purpose. Every shipper of sheep to the Detroit market has profited through Mr. Ward's regular and heavy purchases.

He has now, we understand, some 25,000 head at his ranch near Pontiac, and is purchasing all the grain and forage required for them. In this week's issue he advertises for 25,000 bushels of shell corn and 10,000 bushels of beans. These figures give some idea of the extent of Mr. Ward's feeding operations. His purchases of grain and forage have been a boon to the farmers who can supply what he requires. Had those sheep gone to eastern feeders the farmers of this State would not have sold a bushel of grain or a ton of fodder to put them in shape for the market. What this amounts to can be surmised from a statement by Mr. Ward, in a private note, in which he says that he has paid out to the farmers of Michigan the past month, \$58,000 in cash. As he has been feeding for a number of months, his entire disbursements for stock and feed must amount to a very handsome sum. We may state, also, that he is entirely responsible for anything he purchases, as he has all the capital he requires.

When writing advertisers mention Mich. Farmer.

Now

Is the time when you should take a Spring Medicine to purify your blood, give you good appetite, sound sleep, steady nerves and perfect digestion. That scrofulous taint, that skin trouble, that liver

difficulty, that bilious tendency, that tired feeling, are all cured by Hood's Sarsaparilla. Give this medicine a fair trial and you will realize its positive merit. It is not what we say, but what the people who are cured say, which proves that

Hood's Sarsaparilla

Is the Best Spring Medicine. C. I. Hood & Co., Lowell, Mass.

Hood's Pills cure Liver Ills; easy to take, easy to operate. 25c.

WANTED. Pair of Work Cattle, well broken, well matched, weighing not less than 3,000 lbs., or over six (6) years old. Address, stating where they can be seen and bottom price, Box 125, Detroit.

EGG PRODUCERS, ATTENTION!

You cannot afford to be without Granulated Bone and Shell for your poultry, and you cannot afford to grind them yourself when you can purchase pure and well prepared at the following prices:—Granulated Bone, \$1.75 per cwt.; in lots of 500 lbs. and over, \$1.50 per cwt. Granulated Shell, 75c. per cwt.; in lots of 500 lbs. and over, 50c. per cwt. f. o. b. cars Easton, Pa. Manufactured and for sale by F. C. WILLIAMS, Easton, Pa. Mention this paper.

STOP THE GROWTH OF HORNS.—Book Free. Write JOHN MARCH CO., 16 River St. Chicago. Chemical Dehorner at Druggists.

MUST HAVE AGENTS AT ONCE to sell Sash Locks and Door Holders. Sample Sash Lock free for two-cent stamp. Immense; better than weights; burglar proof. \$10 a day. Write quick. Address BROAD & CO., Box 111, Philadelphia, Pa.

THE MAIN MUSCULAR SUPPORTS OF THE BODY WEAKEN AND LET GO UNDER

BACKACHE

OR LUMBAGO. TO RESTORE, STRENGTHEN, AND STRAIGHTEN UP, USE



THE FINEST LOT OF

Peach Trees

in the country, including the new TRIUMPH, SNEED, GREENSBORO, FITZGERALD and BOKARA.

Everything else in the nursery line. Write for our 158 page catalogue free. Cut prices on large lots. Correspondence solicited.

STORRS & HARRISON CO., Box 450 Painesville, O.

The Horse.

THE CARRIAGE HORSE.

Alexander Galbraith, a veteran in the business, has been furnishing the Chicago Horseman with his ideas on how to produce the carriage horse. What he says regarding the various breeds of carriage or coach horses, is strictly in accordance with facts, except that instead of a dash of the thoroughbred in most of them they carry more of that blood than any other. This is true of the French and German coach horses, and also of the Cleveland Bay, the latter having more cold blood, through recent crosses, than any of the others. But here is Mr. Galbraith's ideas of how to breed coach horses:

The manners a horse is capable of showing depend necessarily on his brain power or intelligence, hence the importance of choosing stock, whether for breeding or using, with properly shaped heads, wide between the eyes and tapering towards crown and muzzle. A 16-hand horse is preferable to one that is only 15.2, but if the latter has decidedly better action he will outsell the larger horse every time—other things being equal. In fact, the action and style control the price more than anything else at the present day. As regards color, almost any color is good if we keep clear of light grays and piebalds, but probably the most fashionable is chestnut, with white markings, while solid bays and browns are always desirable. Blacks are less sought after.

A great many of our trotting bred mares are admirably adapted for raising just the kind of carriage horses which the American and European markets demand, provided they are properly mated. They may not have the high knee and hock action which is desired, in fact such attributes are extremely scarce, but apart from this they possess almost all the other essential qualifications. They are almost invariably of good color and disposition, and many have size enough and fairly good quality and style. Those that happen to have a dash of thoroughbred blood are all the better on that account, for the reason that such generally have nice heads and necks and possibly superior quality and style to the intensely-bred trotting mares. Now, what kind of sire must we use? This is the all-important question, and I am not one of those who advocate a very large or heavy sire for the production of carriage horses. Doubtless many French and German coach stallions of the larger order are splendid specimens individually, and I will not deny but what they sometimes give good carriage horses when the mating is happily accomplished, but my observation leads me to agree with Mr. Dunham in the opinion that the best of these sires are strongly impregnated with the blood of the English thoroughbred and that the very heavy stallions are never the best breeders. Our western farmers who purchase coach stallions want a good deal for their money and usually look for large horses weighing something between 1,400 and 1,600 pounds, but in this lies their fatal mistake, as such heavy stallions having, beyond any reasonable doubt, more or less draft blood in their veins are quite unfitted for the production of fine quality carriage horses with any degree of uniformity. My idea of a stallion is about 1,250 pounds, and with 16-hand mares I should always prefer a 1,200-pound sire to one that weighed 1,300 pounds, unless, of course, he happened to be very fat. Have the stallion just as full of quality, style, vigor, vitality and high all-round action as you can possibly get, with a neat, well-formed head and a neck of good length and well arched onto a pair of oblique shoulders. His heart girth should be ample, as the staying power and sustained jauntiness depend on the horse feeling fit and fresh. No slab sides, nor goose rumps, nor crooked legs can be tolerated. He should be "round as an apple, smooth as an orange," and his limbs properly set under him, and of a texture like Damascus steel. Whatever breed or family he may belong to, he should be typical of that breed or family and not an "accident." He should, above everything, be absolutely free, not only from hereditary unsoundness, but from such defects in conformation as may under strain or pressure produce unsoundness—curby hocks for instance. We all know that many of our fastest trotting horses have very unsightly hocks—hocks that in a carriage horse would be simply intolerable. And so in regard to heads. In some families the head is strikingly plain and unattractive, while the opposite holds good in certain other families. Where beauty rather than speed counts, as it does in the carriage horse, we must bring our actions in conformity therewith, and a large or plain looking head always detracts from the value of a heavy harness horse. The same remark applies of course to ewe necks, calf knees, cow hocks, etc., etc. Our constant and universal striving after excessive speed to the neglect of conformation, size, style and action has had the natural but most unfortunate effect of loading us with many thousands of undersized, unshapely, and in too many cases, unsound animals that are neither a credit to the breeders' intelligence nor that of the nation at large. Mares of this description should not be bred at all, as such a proceeding would only tend to perpetuate those infirmities which we ought all to deplore. Let us choose only sound, shapely, intelligent mares—it matters not whether they are standard bred or not, so long as they are free from draft blood. If they have some warm race horse blood in

their veins so much the better, but we must remember that in such mares the trotting instinct is not nearly so strong and therefore we must see that the stallion is a strong, lofty, square trotter. Leggy mares are never desirable nor are they reckoned the best producers—"long, low and wide" being the orthodox description of the ideal brood mare. If it be the case, as is claimed by Mr. W. R. Trotter—one of the best horse judges in England—that the mare most frequently imparts to her offspring her own head, neck, respiratory organs and disposition, it is very essential that these be as near perfect as possible in the dam. The same high authority claims that the sire is more apt to influence the progeny in limbs and action—hence the importance of seeing that our stallions are especially strong in those features. I cannot at present say that my observations either confirm or oppose Mr. Trotter's theory, but I consider any opinion he may offer well entitled to respect and worthy of due consideration.

HORSE GOSSIP.

THEY have a Turf Club at Stratford, Ont., and one of its rules specifies that no horse owner, trainer, or driver shall be eligible for election to the executive committee.

Forty American bred horses raced in England last season, and with fair success. W. K. Vanderbilt has a breeding stable near Paris, and will begin racing there in 1898. His brood mares are of American breeding, and number sixteen head.

The mummy of an Egyptian princess who had red hair has just been taken from a tomb near Karnak, and investigators are now looking for the white horse that is popularly supposed to always accompany that peculiar style of hirsute adornment.

THE Kentucky Futurity, for foals of 1897, will be worth at least \$46,000. This stake, which is the greatest event of the kind on the harness-racing turf, closes March 16, when mares must be named. The stake will be trotted for in 1900, the year the two-minute trotter is due.

THE Prussian Minister of Agriculture has recently altered the regulation for the importation of American horses. The executive authorities have been instructed that henceforth American horses are to be kept isolated at the ports of entry for eight days. After veterinary inspection during that period they are to be free for sale or inland transportation if the veterinary surgeon declares them free of infectious diseases.

This is the season of the year when the owner of a broken down stallion announces that he intends training and campaigning him again. Then all the turf journals and daily papers gravely publish this rot, and the sharp owner has accomplished all he wishes—his stallion is kept before the public. There are an unusual number of has-beens being touted by the press as starters this season, some of which are crippled for life, and could not stand a week's training. We have several in Detroit and vicinity.

THE following stakes, to be decided at Fleetwood track, will close March 14: 2:12 class, trotting, purse \$3,000; 2:17 class, trotting, purse \$3,000; 2:24 class, trotting, purse \$3,000; 2:30 class, trotting, purse \$3,000; 3:00 class, trotting, purse \$1,000; 2:50 class, trotting, 2-year-olds, purse \$2,000; 2:40 class, trotting, 3-year-olds, purse \$2,000; 2:09 class, pacing, purse \$2,000; 2:20 class, pacing, purse \$2,000; 3:00 class, pacing, purse \$1,000. If any of our Michigan men want a piece of these stakes they will have to act promptly.

A MICHIGAN fall circuit is in process of formation, the Horseman says, which, if completed, will embrace all the large cities in central and northern Michigan, as follows: Bay City, Port Huron, Flint, Alpena and the Soo. The dates for the racing will be as follows: Port Huron, Aug. 17 to 20; Flint, Aug. 24 to 28; Bay City, Aug. 30 to Sept. 4; Alpena, Sept. 6 to 10; Soo, Sept. 14 to 18. The only city that has not definitely decided to go on the circuit is Flint. Bay City has not had racing for three years. This year racing interests have been given an impetus by the election of a well-known man as officers of the Bay County Agricultural Society, which owns the track and fair grounds.

A CORRESPONDENT of the Horse World talks very sensibly in the following extract: "If the average breeder of horses would endeavor to have more of the well-known family kind and fewer of the kind known as prospective race horses, he would find breeding a more profitable business. True, not every foal will, with the best of handling, make a reliable family horse, and some that will, might in a professional trainer's hands develop race horse speed; but the average farmer breeder, the one who breeds but a few foals each year, will find it more profitable to produce reliable road horses than to attempt to produce race horses. A good road horse will at almost any time sell at a price that will allow his breeder a profit and if he has in him the elements of a race horse someone will find it out and in due time the breeder will reap the benefit of owning the dam and perhaps some brothers and sisters to a fast performer, while someone else will have paid out the many hundreds of dollars which it costs to develop a race horse."

HOME SEEKERS and ONE WAY SETTLERS' tickets via Wabash route. On sale first and third Tuesdays in each month to and including May 15th, '97. To points in Kentucky, Tennessee, Alabama, Louisiana, also Kansas, Nebraska, Arkansas, Texas, Western Colorado and the Northwest. For particulars address Wabash City Office, No. 6 Fort St. West, Detroit.



is much better than going for the doctor, and is quite as effective and costs less money. You need always at hand a safe, sure remedy like

Warner's Safe Cure

which will bring instant relief from sudden illness and work out a permanent cure.

A POSITIVE CURE FOR
**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Cures also, all those diseases arising from disordered Kidneys or Liver. Large sized bottle or new style smaller bottle at your nearest store. Try it and know the satisfaction of such a remedy.

Evergreen Stock Farm.

Nine stallions for sale, five imported and four American bred. Six Black Percherons and two imported French Coach. For further description, address THOMAS CROSS, Bangor, Mich.

ZENOLEUM
THE NON-POISONOUS
SHEEP DIP.
..Prevents and Cures..
For Scab—Dip with ZENOLEUM.
For Ticks and Red Lice—Dip with ZENOLEUM.
For Paper Skin—Dip with ZENOLEUM.
For Foot Rot—Pare the hoof and wash with ZENOLEUM.
For Gangrene at Lambing Time—Inject with ZENOLEUM.
For Grub in the Head—Inject with ZENOLEUM.
For full directions and price, address THE ZENNER-RAYMOND DISINFECTANT CO. Agents wanted. 16 Atwater St., DETROIT MICHIGAN.

Horse Owners Should Use

GOMBAULT'S

Caustic Balsam

The Great French Veterinary Remedy.

A SAFE, SPEEDY AND POSITIVE CURE.



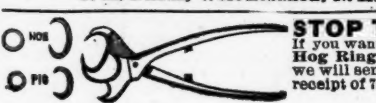
SUPERSEDES ALL CAUTERY OR FIRING
Impossible to produce any scar or blemish. The safest best Blisters ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable. WE GUARANTEE CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc., Address THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio



Dana's White Metallic Ear Marking Label, stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted. C. H. DANA, West Lebanon, N. H.



When writing advertisers mention Mich. Farmer.

THE KEYSTONE DEHORNER
It is humane, rapid and durable. Fully warranted. HIGHEST AWARD AT WORLD'S FAIR. Descriptive circulars FREE. A. C. BROSIUS, Cochranville, Pa.

Directory of Live Stock Breeders

CATTLE.

JOHN LESSITER & SONS, Cole, Oakland Co., Mich., breeders of Scotch bred Shorthorns. Fine young bulls and heifers for sale. Also Shropshire sheep.

J. F. & E. W. ENGLISH, Clarksville, Mich., breeders of registered RED POLLED CATTLE, Olney and Sultan heads the herd.

20 HEAD Polled Durham Cattle.
Catalog Free. A. E. & C. I. BURLEIGH, Mason, Ill.

FOR SALE.

To reduce my herd I offer for sale eight thoroughbred and high grade Holstein Cows. These cows have all made records of from 7,000 to 10,000 lbs. of milk in one year. JAS. H. MURRAY, Salem, Mich.

CRYSTAL SPRING STOCK FARM.
JERSEY CATTLE, bred for intrinsic value, individual merit and future usefulness. Rich cream and butter product, coupled with fine form and good constitution first consideration. Stock for sale. O. J. BLISS & SON Silver Creek, Allegan Co., Mich.

SHEEP.

HAMPSHIRE SHEEP for SALE.—A choice lot of all ages and both sex. Prairie Castle Farm. J. H. TAYLOR, Mendon, St. Joe Co., Mich.

BEAUTIFUL EWES

Elegant Shropshires at special prices for 20 days. Write at once for price list. A. H. FOSTER, Allegan, Mich.

HOGS.

NICE, large POLAND CHINA SOWS, bred to Bob Wilkes, for April and May farrow. Prices low. F. M. PIGGOTT, Fowler, Clinton Co., Mich.

POLAND-CHINAS.—Large, growthy spring sows, bred to Wilkes U. S. for March and April farrow. Boars all sold. L. F. CONRAD, Wacousta, Mich.

R. M. CROSS, Ovid, Mich., breeder of Victoria Swine. Stock for sale. Breeding stock all recorded. Reasonable prices. Correspondence solicited.

LARGE ENGLISH BERKSHIRES and SHROPSHIRE. Sheep highly bred. Call or address MERCHANT KELLEY, Woodstock, Mich.

POLAND-CHINAS.—Choice sows already bred One male pig also M. B. Turkeys and B. P. Rock cockerels. A fine thoroughbred Jersey Bull for sale. O. B. ROBBINS, Edwardsburg, Mich.

VICTORIA SWINE.—One yearling boar, also a few spring sows. Glits all sold. Choice fall pigs. C. G. ROBINSON, Mason, Mich.

POLAND CHINAS. Pigs all sold. Send for 1897 Catalogue. E. A. CROMAN, Grass Lake, Mich.

POLAND-CHINAS. GREAT BARGAINS in young boars and sows of high quality and best breed. L. W. BARNES, Byron, Shiawassee Co., Mich.

Large English Berkshire Swine. Pigs of September farrow for sale cheap. Also sows bred for March and April farrow. PAITHORP & HACKNEY, Mt. Morris, Mich.

THE PLUM HILL HERD of Berkshire swine. Shorthorn cattle, B. P. Rock and S. P. Hamburg fowls. Stock and eggs for sale. C. M. BRAY, St. Johns, Mich.

Poland-China Pigs for Sale, both spring and head to select from. Also Light Brahma chickens. DOUGLASS HALL, Hastings, Mich.

N. A. CLAPP, Wiscom, Mich.

BREEDER OF Large English Berkshire Swine. Write for prices.

FINE BLOODED Cattle, Sheep, Hogs, Poultry, Sporting Dogs. Send stamps for catalogs. 150 engravings. N. P. BOYER & CO., Coatesville, Pa.

I SOLD CORWIN KING for \$200 at 7 years. He now heads the oldest herd in Iowa. If you want TOP POLAND-CHINAS write WM. H. COOK, Waterford, Mich.

CLOVER LAWN FARM. I. N. COWDREY, breeder of Duroc Jersey hogs; B. P. R. eggs in season; 60 kinds of strawberries; all kinds of small fruit. Extra seed potatoes, marketable size, Rural N. Y. No. 2, American Wonder, Empire State, Carman No. 1, Wilson's First Choice, Fostock and Everett's Six Weeks. Send for descriptive list. I will treat you well. Ithaca, Mich.

POLAND CHINA SWINE. A few large, heavy boned April males, cheap; some fine sows bred and safe, and a grand old fall pig. Write us. Willard Perry or M. H. Burton, Hastings, Mich.

\$10 GIVEN AWAY. Same thing, when you can buy a pair of show pigs for price other breeders charge for one. Wm. W. Balch, breeder of Improved Chester Whites, Deford, Mich.

W. O. WILSON, Okemos, Mich., proprietor of the Michigan Central herd of IMPROVED CHESTER WHITES. I now have a fine stock of young breeders on hand. Come and inspect my herd if convenient; if not, write your wants. Choice Light Brahma cockerels \$1 each.

STOP THOSE HOGS FROM ROOTING. If you want to be SURE of stopping them, get the Wolverine Hog Ringers and Rings. For sale by all hardware stores, or we will send by mail, one Double Ring and 100 Rings on receipt of 75c. Address HEESON BROS. & CO., Patentees and Manufacturers, Tecumseh, Mich.

The Poultry Yard.

For the Michigan Farmer.
HOW SHE DOES IT.

In a recent issue of the FARMER J. B., rises to inquire how I find time to take care of the poultry, as I told, write for the FARMER, attend to the aid society and entertain company. Now J. B., I did not say I always spent five hours per day caring for my poultry; but that I did when I took care of them properly. Now when I expect to attend the aid society, or when unexpected company arrives, or when the mood to use my pencil seizes me, I try to have my poultry work so well in hand that I can leave without serious damage, for I long since learned that if any one else attends to the fowls something is sure to go wrong. So when I attend the W. M. S., I never stay to tea, but 4 p. m. finds me on the way home, if not already there. My poultry house is very close to the kitchen door—everybody says too close, but by the aid of perfect cleanliness and frequent plowing of yards, I find no disadvantage, but a great saving of steps. When company comes, I slip out and see that the water dishes are filled and ventilation all right between the lower and upper stories and then scatter a little grain, in long winrows and cover with the litter, and they exercise and scratch and get their own supper. Now and then I can slip out for a moment and see that all is well. In summer time I have to ask to be excused, when the time comes to care for chicks. I have to go, company or no company. The cleaning up times, when the litter is changed on the floors, kerosene oil applied to the perches and the premises fumigated with sulphur, I generally take Saturday or Monday morning to attend to; don my regimentals and go at it. For the benefit of those contemplating the buying of fancy stock, I will say that I scarcely ever get down to business before a highly dressed lady and gent, from a near-by town, are sure to call and see the flock or get a sitting of eggs. I have to do the hostess and salesman act without time to change my clothes. Or perhaps a dude with high hat and patent leather shoes will banter me down for an hour on the price of a cockerel. On such occasions the men folks have to wait a little for dinner. The insect powder act is largely done after 8 p. m., and callers seldom interrupt that necessary operation. As to the writing, I write when I can at odd spells; for I seldom get everything done in advance, hoping for a whole day to myself, but what the hay-balers are sure to drive in, or the children of the entire school district will come, one by one, with various errands, and the tenants of the neighborhood will want a drawing of tea or a pair of butter-milk. These things used to make me nervous, but I am getting over that, as I am a firm believer in a divine Providence that overlooks all our little annoyances, and that nothing happens by accident. I lay my writing aside and find the recitation that is wanted, or the various articles needed. A dear old lady used to break in upon my writing days. She would drop in, sun-bonnet and knitting work and all, and perhaps a new book, also, at 8:30 A. M. and stay till after dinner, and I am so thankful, as I look back, to think I always urged her to stay and took time to chat with her, for her busy hands and feet are still and no cheery "good morning" breaks the tread-mill of busy days.

I have learned the folly of raising too many fowls, for disease makes many calls at crowded poultry yards, so I plan to raise fine fowls but not many. Next to the duty I owe to God, and to the necessary wants of the family, I have to put my poultry work, for the necessities of the times demand it. When I go to the poultry house, it is with every sense alert, and I can see a good deal in a short time. If your mind is on something else you will not attend properly to your fowls; I have no time for fancy work, but make out to read a good many papers and some new books; but I only found a short half hour in the whole summer to lie in the hammock. Yet city ladies tell me, when I go peddling chicks for their benefit, that the farmer's wife has more leisure than they, and every pleasant afternoon the hammocks are filled with their fluttering ribbons and lace, and perhaps a bit of fancy work, or a new book. I have no time for these things, except evenings after the poultry work is completed, and I am very sure that my neighbors are equally busy.

Diff'rent correspondents have expressed their fears as to the usefulness of scratch pens in the lower story. Mine is very satisfactory, as old window sash fill the entire south side, admitting sunlight down on the floor where it is needed, and the chicks stretch themselves out and roll and wallow in delight. At night outside doors shut down over the glass, keeping out the cold, and an extra basket of chaff will make them work like beavers. But each division should be made separate and tightly ceiled; unless you take this precaution a draft may result, which is always injurious.

Where are you planning to put the early sitters? Don't put them in the rooms occupied by the laying hens if you have to set them in barrels in the barn and cover them with old carpets, removing from the nest every other day for feeding and watering. I have had them arranged this way, 20 at a time, and filled the intervening spaces with straw when a blizzard came, and they hatched well, and the wise Plymouth Rock

biddies staid in their places, never once peeping out to take notes of the weather or the change of place. PRISCILLA PLUM. HILLSDALE CO.

For the Michigan Farmer.
POULTRY NOTES.

Was there ever a poultry paper published that did not advise farmers to select out the best layers from their flocks? It sounds well, but these editors do not stop to consider what a difference there is between the fancier, who gives his time and attention to watching a few birds, and the farmer who has a dozen things to look after, any one of which is of more importance than the hens. How is he to know which are the best layers? It would be no small trouble to find out. It is more satisfactory to choose the more vigorous, quick-growing hens, and buy a male from a fancier whose flock has a reputation for laying.

When chicks are raised in the winter, a good incubator is important. Taking the chances with a hen is too expensive during cold weather when eggs bring a good price. If she has comfortable quarters she can raise chicks, but cannot do as well as a brooder. In the summer time she has the advantage over the artificial process.

The English pheasant is not often met with here, yet for an ornamental fowl it is one of the most desirable. The plumage of both sexes is handsome, while their symmetry and gracefulness make them pleasing to look at. They are hardy and as easily kept within bounds as other domestic fowl. We should like to see them raised more extensively. They are too small to be of much importance as layers, but their flesh is excellent. They are small, but as large or larger than some of the Bantams, and certainly as attractive.

We were lately looking at a flock of Buff turkeys, and were surprised to find how heavy the fowls were, although they appeared to be undersized. The owner informed us that they matured somewhat quicker than the Bronze, and that they did not wander. We have had no experience with the breed, as the Bronze is the variety raised almost exclusively in this vicinity, but we would like a bird that could content itself at home, and it is doubtful if the Bronze can.

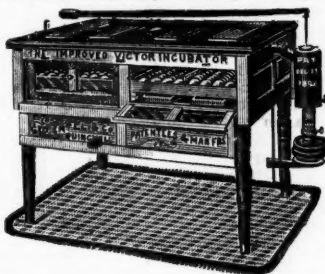
In China artificial incubation has been carried on for hundreds of years, and yet the hatchers are of the crudest kind. The eggs are placed in a basket, covered with hot wheat and suspended over a charcoal fire. Once in two or three days the eggs are uncovered and allowed to cool for an hour or more. By this process from three to five days in time are gained over the natural mode. That good results are obtained by such primitive means is proof of the wonderful skill and patience of the operators.

In the scale adapted for Asiatics and Americans there are forty-three points allowed for shape and twenty-nine for color; with the Mediterraneans there are forty to twenty-seven. Besides this there are the points for comb and other useless matters. Compare this with the scale for cattle, sheep, or swine, and there will be no need to wonder why thoroughbred poultry has not received its due share of attention.

"That was the best bird in the flock," remarked a visitor at the poultry show alluding to a fowl that had been left at home by an exhibitor. "True," admitted a brother fancier, "but the bird would not score. He was too heavy, lacked points to his comb, and so on." The would-be purchaser was not satisfied. "Anyhow," he answered, "I would rather have that cull for my 'utility' flock than any of your 'fancy' roosters." The fancier seemed inclined to agree with him that fancy breeding was not always what it should be. F. D. W.


The Secret of Success with Poultry.

The greatest helps and most positive advantages that poultry raisers can have are a good incubator and a brooder. To anyone contemplating the purchase of an incubator and brooder, we earnestly recommend a careful examination of the Improved Victor Incubator and the Improved Victor Brooder, and an investigation of the reputation of their makers, the Geo. Ertel Co., Quincy, Ill., who claim the Victor to be the only absolutely self-regulating



incubator made and the easiest to operate; that it will hatch as large a percentage of fertile eggs as the highest-priced machine on the market; that both the Victor incubator and brooder are the strongest, neatest and most durable in use; and form the cheapest first-class hatching and raising outfit that can be had.

A highly interesting and valuable illustrated book on incubation, together with descriptions and prices of these machines, may be obtained of the manufacturers for 4 cents in stamps, or to those who mention the name of this paper they will send it free.



A PROSPEROUS FARMER

will always have an air of success about himself and his farm. Nothing will give such an air of prosperity to your houses, barns, wagons, buggies, tools, etc., as the careful use of paint. There is economy in paint. A barn that is painted, and kept painted, will not wear out half as fast as one that is allowed to become weather beaten. That is true of everything paintable.

THE SHERWIN-WILLIAMS CREOSOTE PAINT

is exactly suited to the coarse-grained woods generally used in barns, fences, etc. It contains creosote. Creosote is a disinfectant and prevents decay.

Our booklet "Paint Points" tells why it is economical to use paint. It tells what to paint and how to paint. It is a handy book to have about the house. Send for it to-day—it is free.

THE SHERWIN-WILLIAMS CO.

CLEVELAND. CHICAGO. NEW YORK. MONTREAL.

FOR BOOKLET ADDRESS, 13 MICHIGAN ST., CLEVELAND, O.


—Copyright 1897—The Bates-Whitman Co., N.Y.—690

"LIVER GAVE TO THE WORLD THE CHILLED PLOW"

and it has saved more money to the farmers of America than any other implement ever produced

Oliver Chilled PLOWS

Are the Best on Earth.



The Nos. 98 and 99 wood and steel beam plows fitted with Non-breakable Steel Standards and the Celebrated No. 40 meet all requirements and cannot be equalled.

Look Out for Imitations and Buy Only of the Regular Oliver Agents.

MONEY SAVED

On Buggies, Carriages, Wagons and Harness. Material and workmanship fully guaranteed. 8th year in business. Prices from one-third to one-half below regular retail prices. Write for Illustrated Buyers' Guide, and convince yourself. Highest references. Freight paid. Miami Mfg. Co., 104 W. 4th St., Cincinnati, O.

ONE HUNDRED DOLLARS AN ACRE

Can only be made from one source—POULTRY. Wheat and corn do not pay by comparison. You may smile, but have you ever tried keeping poultry right. The egg basket is a handy source of revenue these hard times. **THE POULTRY KEEPER**, Box 41 PARKESBURG, PA. sends a year tells how it is done. Sample free. The paper 1 year and four grand Poultry Books, Jr. Write to-day.

THE JOY OF SUCCESS

is sure to follow the use of the New Successful Incubator. Its just like making any other sure and good investment. Regulates its heating to a nicety; needs no watching; generates its own moisture. Hatches every egg that can be hatched. Sold under a positive guaranty. All about it in Book on Incubation and Poultry. Sent for 6c in stamps. Address **DES MOINES INCUBATOR CO.**, Box 85, DES MOINES, IA.

SAUMENIG! HATCHERS

are made on best lines and of best material known to incubator art. They cannot fail. **HEATS WITH HOT WATER!** Hatches every egg that can be hatched. Send 2 stamps for catalog No. 17. **INVINCIBLE HATCHER COMPANY**, SPRINGFIELD, OHIO.

THE PROFIT

to be derived from the poultry business & many things of value to poultry men, together with a full description of the **MONITOR INCUBATOR** is contained in 80p. catalog. Send 4c. stamps. **A. F. WILLIAMS**, Successor, BRISTOL, Conn.

BUY NO INCUBATOR

And pay for it before giving it a trial. The firm who is afraid to let you try their incubator before buying it has no faith in their machine. We will sell you ours **ON TRIAL**. Not a cent until tried, and a child can run it with 5 minutes attention a day. We won First Prize World's Fair, and will win you for a steady customer if you will only buy ours on trial. Our large catalog will cost you 6 cents and give you \$100 worth of practical information on poultry and incubators and the money there is in the business. Plans for Brooders, Houses, etc., 25. N. B. Send us the names of three persons interested in poultry and 25c. and we will send you "The Bicycle, its Care and Repair," a book of 180 subjects and 98 illustrations, worth \$5 to any bicycle rider. **Van Gulin Incubator Co.**, Box 1238, Delaware City, Del.

SMOKE YOUR MEAT WITH KRAUSERS LIQUID EXTRACT OF SMOKE

SEND FOR CIRCULAR. **E. KRAUSER & BRO.** MILTON, PA.

When writing to advertisers please mention that you saw their advertisement in the MICHIGAN FARMER.

M. B. TURKEYS of different families of pure breeding. Also B. P. Rocks at the old stand. **J. F. ROBBINS**, Gun Lake, Mich.

POULTRY—For catalog of leading varieties address **MILLER BROS.**, Bedford, Mich.

BARGAINS In B. P. Rock cockerels and **POLAND CHINA SOWS**. **A. A. WOOD**, Saline, Mich.

BIG beautiful Barred P. Rocks, exclusively. High scoring, thoroughbred stock. **Pickin and Conger strains**. Cockerels, \$3 to \$5.00; Eggs, \$1 per 15. **E. M. KIES**, Reading, Mich.

BARRED PLYMOUTH ROCKS, Brown egg strain. Bred for Egg Production. Every egg guaranteed to hatch or money refunded. Write for particulars. **GEO. H. REISSMAN**, Northville, Mich.

PRIZE WINNERS. **PRICES REASONABLE** of 39 leading varieties of high class Poultry and Eggs. We never fail to win whenever shown. Guarantee everything we sell. New Catalog for 1897 printed in colors will be mailed free. **JOHN BAUCHNER, Jr.** Box 46, Freeport, Ill.

HATCH Chickens BY STEAM with the MODEL EXCELSIOR Incubator

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatchers made. **GEO. H. STAHL**, 114 to 122 S. 6th St., Quincy, Ill.

THE IMPROVED VICTOR Incubator

Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars FREE. **GEO. ERTTEL CO.**, QUINCY, ILL.

162 FIRST PREMIUMS The largest breeders in the world use **PRAIRIE STATE MACHINES** exclusively. Send for 108 page catalog. **PRAIRIE STATE INCUB. CO.**, Homer City, Pa.

INCUBATION

is the first step in the poultry business and much of future success depends upon its completeness. There is no failure where **RELIABLE INCUBATOR** is used. It is fully warranted and is the product of twelve years of experience. It has never been beaten in a Show. It is not like its competitors—it is better. We tell why in new book on poultry. Send for it. **RELIABLE INCUBATOR AND BROODER CO.** QUINCY, ILL.

Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

PRESIDENT—J. T. Daniels, Union Home.
VICE-PRESIDENT—Patrick Hankard, Henrietta.
SECRETARY—Treas.—F. D. Wells, Rochester.
DIRECTORS—G. L. Hoyt, Saline; L. H. Ives, Mason; W. H. Howlett, Dansville; C. J. Phelps, Damon; F. M. Whelan, North Newburg; A. L. Landon, Springport.
All communications relating to the organization of new Clubs should be addressed to F. D. Wells, Rochester, Mich.

MORTGAGE TAXATION AND INTEREST RATES.

The money lenders are urging the exemption of mortgages from taxation on the grounds that the tax falls upon the borrower when the mortgages are assessed; and also, that under the present law but a small proportion of the mortgages are reached by the assessors. Of the second of these propositions we shall have something to say in a subsequent issue. As bearing upon the first we urge the following facts: The two systems of taxing mortgages and of exempting them from taxation, have each been tried in recent years in this State. Under the popularly named Mortgage Reporting law of 1887, the mortgages of the State were generally reached for taxation purposes, and the result was that a vast amount of personal property in the form of credits secured by real estate mortgages was placed upon the assessment roll for the first time, to bear its share of the burden of taxation, and the real estate was correspondingly relieved, with no appreciable change in the rate of interest demanded by the money lenders.

Immediately following came the act of 1891, providing that the mortgagee must pay the taxes upon his mortgage interest in the encumbered real estate, and that the mortgagor should be exempt from taxation to the amount of his mortgage incumbrance. A test case before the State supreme court, brought by the money lenders to secure a final interpretation of the full meaning of this act, resulted in an immediate decision to the effect that the mortgagee could, by inserting the following clause, or one similarly worded, in his mortgages, force the mortgagor to pay the tax upon the mortgagee's interest in the real estate:

"It is Agreed, That said party of the first part shall pay all taxes and assessments which shall (while the monies secured by these presents are unpaid) be imposed upon the premises above described, and particularly all taxes which shall be assessed under the provisions of Act 200, of the Public Acts of Michigan of 1891, upon said premises, including the taxes upon the mortgage interest of said party of the second part in and to said premises, by virtue of this mortgage."

The act thus became, so far as the money lenders were concerned, practically a mortgage exemption act, with the result that the assessed valuation of personal property was greatly decreased throughout the State. This decrease in Wayne county and in other counties where large banking interests exist and where money lenders abound, amounted to many millions of dollars. In other words, the just taxes of the money lenders, including banks which held their credits in the shape of real estate mortgages, were practically remitted and heaped upon the already overburdened real estate proper. And yet the rates of interest did not lower. The evils of this system were so apparent that after a two years' trial the act was repealed in response to the demands of the overburdened taxpayers of the State.

It should be remembered that it is for the resurrection of the most active principle of this most unjust and unpopular act of 1891, that the money lenders are clamoring at the present session, except that they would at this time dodge the necessity of stipulating in the mortgage that the mortgagee shall pay their taxes.

As to the effects of the two systems upon interest rates, the burden never fell more harshly upon the mortgagor than during the time of the mortgage exemption act of 1891-3, until the panic of the past year. The fact that during those two years mortgages were practically exempt did not lower rates of interest a fraction of a per cent, neither did it to any appreciable extent attract outside capital to Michigan for investment. The creditors and not the debtors prospered under the system. Interest rates were not affected, but the taxes

were transferred from the loaner to the borrower.

On the other hand, under the reporting law of 1887, for the first and only time in many years, mortgage creditors paid their just proportion of the taxes, and debtors were correspondingly relieved on taxpaying day, with no rise in interest rates arising from the change.

The one thing above all others needed to reduce mortgage interest rates in Michigan is business prosperity, not mortgage exemption. Millions of dollars are lying idle to-day which would be gladly unlocked at rates fifty per cent lower than those prevailing to-day if only business enterprises, including farming, were paying dividends to their promoters. Let us not be deceived. Exempting mortgages from taxation will never unlock those funds nor lower rates of interest. But general business prosperity will do both. Security attracts investment to-day, not high rates of promised income. Let the owners of credits pay taxes as well as the owners of farms. Let there be no classism in taxation.

LEGISLATIVE NOTES.

Representative F. M. Shepard is doing much good work in support of the County Salaries Bill.

A bill to make a special appropriation of \$20,000 for an electric light plant at the University has been introduced in the Senate.

Let the mortgage tax exemption bill be converted into an iron-clad mortgage-reporting law and the borrowers will take their chances on interest rates.

Everyone having any experience with the toll roads of the State will hail with delight the restrictions upon their operations proposed in Senator Warner's bill.

The State Good Roads League is faring disastrously at present. Both president and secretary have resigned, and demoralization seems to have come, temporarily at least, upon the organization.

It is reported in the daily papers that the legislature will be asked for special appropriations for the University as follows: Electric light plant, \$20,000; law library building, \$30,000; hospitals, \$3,000. The Act of 1893, raising the regular appropriation from one-twentieth to one-sixth of a mill should be carefully read by every member of the legislature before voting upon these measures.

HOUSE BILL 198.

PARMA, Mich., Feb. 22, 1897.

MR. A. C. BIRD,

MY DEAR SIR:—I fully appreciate the importance of the House Bill No. 198, called the Kimball Bill, and I believe that it is the duty of the local clubs to do all possible to secure its passage, and I think all clubs who feel disposed should send committees to Lansing to urge its passage, and present petitions from those clubs.

There is strong opposition to the bill, and should 50 or more clubs do this I think there would be a very good chance of its becoming law.

Should you think this scheme feasible, give a notice in the FARMER urging the clubs to take this up at once.

Yours for the work, B. F. PECKHAM.

REPORTS FROM LOCAL CLUBS.

HOLLY CENTER FARMERS' CLUB.

The first regular meeting since the election of officers was held at the home of Mr. and Mrs. Gaylord, Feb. 13, and was in every way a success. The meeting was called to order by Vice-President Fagan.

After listening to a very interesting literary program, the visitors present were given an opportunity to unite with the association, and four names were received as applicants for membership.

We are glad to note the growing interest among the farmers of this vicinity in the club movement, many visitors being present at each meeting, most of whom afterwards become members.

After the transaction of the usual club business, the discussion of the question for the day was taken up. The question was, "A comparison of the farmer's condition with that of other classes in society."

Mr. E. E. Wheeler led the discussion, showing in his remarks that farming is the most healthful and moral, if not the most successful, of human employments.

Rev. Mr. Gould followed with a few remarks on the social and educational advantages of those who live in the city. He also spoke of the exactions made on the time and health of professional men.

In the general discussion it was shown that while thousands of laborers and mechanics have been reduced to beggary and want through lack of employment, the

farmer has steady work and is dependent on no person or circumstances for the continuation of his employment; that no other calling gives that variety of open air exercise so conducive to good health; that the occupation itself is not only one of the most innocent, but that the farmer is subject to less temptations. It was also shown on good authority that while not more than three per cent of the better class of merchants in any of our larger cities secure a competence, nearly all the better class of farmers are able to secure an independence.

The general conclusion was that farming, as an industry, has many compensations and advantages, and that the condition of the tillers of the soil will compare favorably with that of other classes in society.

The next meeting will be held Feb. 25, at the home of Mr. and Mrs. Friend Austin.

REPORTER.

CLYDE AND GRANT FARMERS' CLUB.

The farmers' club of Clyde and Grant held a large and interesting meeting at the town hall, in Grant, on February 3d, with a view toward the extension of club work. The prospects for the formation of a club in the northern part of Grant are very favorable. About one hundred and twenty-five were present at this meeting. President David Beard occupied the chair. A good literary program was presented, consisting of several more than commonly good papers and discussions.

Mr. Kingsley read the letter of Hon. C. V. DeLand to A. C. Bird, appearing in the MICHIGAN FARMER of January 30. This brought out a spirited discussion and some statistics on taxation.

The idea was expressed that all property should be once taxed fairly for the maintenance of all public expenditures and State institutions. It seemed to be the general opinion that in view of the close financial condition close economy should be practiced in all departments.

Mr. Burch, from statistics, compared the cost of board for prisoners in St. Clair county at four dollars per week with that in London, Ontario, at four and one-half cents per day.

Hon. John Gibbons presented a bill to regulate the disbursement of the poor fund, but in the estimation of the club it was defective and was referred to a committee on resolutions for further consideration.

The next meeting will be held at the home of our president at Ruby, L. B. Rice, the horticulturist, will be present and give some practical instructions in peach tree pruning. Mr. Beard having a fine growing orchard. MRS. O. MCKAY, Cor. Sec.

GRAND BLANC FARMERS' CLUB.

Friday evening, Feb. 12th, Grand Blanc Farmers' Club held their regular monthly meeting at Davis Hall, President Stuart presiding.

The hall was well filled in honor of Judge Newton, of Flint, who was present and gave a very able paper on Farming; thoughts suggested by the hard times when dollars had grown as scarce as teeth in a chicken's mouth. He believes good farming requires thought, and that of the highest order. Be in season in planting, as also in sowing and gathering, and busy from spring till fall. A lazy man, that is one born tired, can never succeed. Fields should be kept clean, and the crops crowd out the weeds. Plowing when water follows the plow is wasting time and injuring the land, perhaps permanently.

Benjamin Franklin's advice to boys to save the pennies and the dollars would take care of themselves, applied, means, save small things either of time or money. Time wasted at the right moment may cost several tons of hay. Kindness to all—that, with sufficient feed and shelter for stock, was economy. By economy he did not mean being parsimonious as misers. Do not be economical at expense of wife or children, but provide all necessities, good books and papers, beautify the home with pictures and, if possible, save something every year. Save enough to insure the lives of parents in some good company. Two things are inevitable—taxation and death, and both are paid reluctantly. Death should be provided for by insurance, as the time of miracles is past and God helps those who help themselves.

The farmer as an economist should not go in debt except in extreme cases, and should not be ready to invest in all machinery or fancy grains that are brought to his door by persuasive agents. The farmer should teach his sons that farming stands at the head of all professions. After this paper came the usual business transactions.

On account of sickness Mrs. H. R. Dewey was not present with her paper.

After appointing program committee for next meeting, club adjourned.

MRS. M. S. EAMS, Cor. Sec.

SALEM FARMERS' CLUB.

Fifty members of the Salem club met at the home of Mr. and Mrs. Peebles, February 3d.

The executive committee had prepared an excellent program which was carried out, after which the discussion of the State Association question for the month was entered upon.

Mrs. Anna Thompson opened the discussion by calling attention to the questions discussed during the past year. She found none among them which should not interest the farmers' wives and daughters as well as the farmers. She thought if the ladies would avail themselves of the privilege of discussing whatever question came before the club it would be more profitable than to have only the opportunity of talking on every third question.

Several ladies substantiated what Mrs. Thompson said, and thought the former plan of work could not be bettered for Salem club. A vote was then taken which was unanimous for the present plan.

Rev. W. H. Hanniford gave us a very interesting talk on farms and farming in

Indiana and Ohio, placing Michigan ahead of both, not alone in farming, but in organizations.

The following resolution was presented and unanimously adopted: Whereas, it has come to our notice that the poultry fanciers of Michigan intend to ask the present legislature for an appropriation of \$2,000 for the benefit of their annual exhibit, and that other associations are likely to follow their example. Therefore, Be it resolved that we, the members of the Salem Farmers' Club, are opposed to all such special appropriations.

Ten new members were admitted to our club, making a total membership of seventy-five. A. C. Bird, of Highland, is expected to be with us at our next meeting. Adjourned to meet at the home of Mr. and Mrs. Will Stanbro the first Wednesday in March.

REPORTER.

PARMA FARMERS' CLUB.

The last meeting of this club was held at the home of Geo. B. King. It being the annual meeting, little else was done but electing the officers for the ensuing year. The election resulted as follows: President, B. F. Peckham; Vice President, E. G. Hubert; second Vice President, Mrs. R. W. Horton; Secretary, Mrs. R. Z. Allen; Treasurer, R. Z. Allen; Reporter, Brad Hubert.

Over one hundred and fifty were present, and much interest was manifested in the future of the movement.

The next meeting will be held at the home of E. G. Hubert on March 5th.

WEST AVON FARMERS' CLUB.

The club met at the home of B. J. Fuller on the afternoon of Feb. 16. At the business meeting resolutions were drafted favoring House bill 198 as follows: Resolved, That we endorse House bill No. 198, and unanimously petition our representative and senator to do all in their power to secure the passage of said bill, and that a copy of this resolution be sent to Senator Warner and Representative Hammond.

The club then proceeded to discuss the question, "Do the farmers get their just dues when they take a grist to the mill?"

C. B. Johnson thought that we usually do not get what belongs to us, but having no scales to weigh with could not tell.

Mr. Griggs always takes his grist and brings it back, and pays no attention whatever to the weight, but thinks that at the present time when we can get it ground for six cents a hundred, as we can at Rochester, it is the cheapest and best way. He also thought a grist would shrink in weight in grinding.

L. W. Fisher thought the millers were not all dishonest. He thought were he a miller he would be very likely to pick out the largest bag in toiling. He considered it best to pay for the grinding by the hundred.

Mr. Fuller said he used to go to the mill for his grinding and thought he never received his just returns, so he purchased a horse power and grinder, and now can keep the toll and all. He thought his plan a great deal cheaper in the long run.

Peter Voorhels, a guest of the club, thought we were often cheated at the mill, and that it would be better to buy a mill and its accompaniments were it not for having so much money invested in machinery these hard times. He feeds a good deal of ground feed every year and thinks it full better to pay for the grinding by the hundred.

After the discussion came the literary part of the program, after which we adjourned to meet again in three weeks at C. B. Johnson's. MRS. L. W. FISHER, Cor. Sec.

NORTH VERNON FARMERS' CLUB.

This club met at the home of Mr. and Mrs. J. C. Curtis on Feb. 3d, with most of the members present. After the usual opening exercises President Kline addressed the club to the satisfaction of all present.

After partaking of dinner the question, "What legislation is needed by the farmers?" was taken up and discussed. The following points were brought out: Laws should be plain, so as to be readily interpreted. All obsolete laws should be repealed. Combinations and trusts should be prevented. It was the sense of the club that the Hammond Anti-Trust bill should become a law.

An amendment to our constitution, changing the club limit from twenty families to twenty-four, was passed, and names were immediately presented, increasing it to the latter number.

One of our members, H. B. Chalker, having died since the last meeting, resolutions of condolence and sympathy were passed and ordered printed.

An invitation extended by Mr. and Mrs. Floyd Owen to hold the next meeting at their home was accepted.

PETER PATCHEL, Rec. Sec.

SUMMERFIELD AND DEERFIELD CLUB.

At the regular meeting of this club the proposition to have every third question such an one as would especially interest the ladies, was unanimously endorsed.

The discussion of the insurance question resulted in some very sharp criticisms of the Wayne and Monroe County Farmers' Insurance Company. No reflections were cast upon the general officers who are known and honored here. Their process was declared to be too expensive, buildings have gone to decay without any change in their valuation, the moral risks were declared too great, too many small claims were adjusted at too great expense. Old receipts were shown, belonging to charter members, showing that the cost of insurance has increased with the increase of business till it is now nearly double.

Much interest is manifested in the coming March meeting when county legislation by the board of supervisors will be up for investigation and reform. Supervisors and ex-supervisors from this and adjoining towns have been invited to speak, bringing in their complaints and recommendations.

So far as heard from they are all, like the rest of us, in favor of reforming the other fellow. It is beginning to be understood that tax reforms are needed right here in the townships and counties. The attention of the club is being turned to these officials and their proceedings.

E. L. LOCKWOOD, Cor. Sec'y.

WALLED LAKE CLUB.

The Farmers' Club met with T. C. Severance on February 3d. The attendance was small but a good social time was enjoyed.

Mr. Green, in speaking of the Association question, stated that it appeared to be the design of the Association to exclude the women from the other questions by setting apart a special time for them.

T. C. Severance Jr. stated that what is of interest to the men ought to be to the women, and vice versa. Of course there are exceptions to this; but all should be interested in all the subjects.

Music was rendered by the club.

HOWARD SEVERANCE, Cor. Sec'y.

TECUMSEH FARMERS' UNION.

This club met last at the home of Mr. and Mrs. M. Smeltzer, on the evening of February 18th. The president being absent the meeting was called to order by the vice-president.

After the opening exercises, the company listened to a well-rendered literary program.

The Secretary read from the MICHIGAN FARMER, under date of February 13th, the County Salaries Bill, after which the following was adopted by the club: We, the members of the Farmers' Union, believe that the principles set forth in House Bill No. 198, now pending in the legislature of our State, would be advantageous to the best interests of the people in general throughout the State. Be it therefore resolved that the Senator and Representative of this district are earnestly requested to use their utmost endeavors to secure the enactment of the aforesaid bill.

Following this the question, Money and its Functions, occupied the attention of the company until a late hour.

The club adjourned to meet in two weeks with Mr. and Mrs. L. H. McConnell, when the same question will be further discussed.

L. H. MCCONNELL, Reporter.

WIXOM CLUB.

At the February meeting of this club the Association question elicited a very lively and general discussion. Some of the sentiments advanced were: That the proposed change would awaken a deeper interest on the part of the ladies; that they would be likely to glean more information upon, and take a more important part in the discussion of questions of especial interest to themselves; that it would have a harmonizing influence on the club. Others thought there is perfect harmony now existing, and a change of policy might bring discordance of interest and consequent decrease in average attendance; that the association was instituted for the purpose of advancing the interests of the farming community by securing the enactment of equitable laws, interests which have heretofore been placed at the mercy of hostile crafts simply because of our own ignorance and neglect of public questions and policies which directly concern us. The removal of these impediments to our welfare is the aim of the Association; and to that end it has invariably given out questions which pertain to the welfare of every household, and that no line of questions could be chosen which ought to so intensely interest both ladies and gentlemen as these very ones. Hence, a change is not desirable.

A resolution was adopted by a very decisive vote, that we are in favor of selecting as every third question, one that is of especial interest to the ladies.

B. T. NICHOLSON, Cor. Sec.

HAMLIN FARMERS' CLUB.

We ate dinner at W. W. Wilson's, February 10th, 1897. The conversation of the forty-one persons present was about storms, crops and topics of local interest. Six persons united with the club.

The women of Hamlin Farmers' Club made a motion that: "We desire an equal share in the topics for discussion, and equal space in the MICHIGAN FARMER with the men. The men believe the women an important factor in our club life."

MUM, Cor. Sec'y.

BRIGHTON CLUB.

The regular meeting of this club was held at the home of Mr. and Mrs. M. L. Crout, February 11th, with a very large attendance.

After the usual opening exercises, a paper was read by our president, J. W. Hilton, on Farmers' organizations.

The afternoon meeting opened with music and select readings, followed by a very able paper by Mrs. M. Beach on the club question. A lively discussion of the Association question followed, after which a vote was taken and it was decided that the ladies should not have every third question.

We were very much disappointed at not having Mr. Gibbons, of the MICHIGAN FARMER, with us as we had expected.

After singing by the club, we adjourned to meet at the home of Mr. and Mrs. C. S. Poote, March 11th.

MRS. H. N. BEACH, Cor. Sec.

OXFORD FARMERS' CLUB.

The Oxford Club met at John G. Sutherland's on Jan. 30.

The following officers were elected for the ensuing year: President, N. L. Frink; vice-president, H. W. Hollister; secretary, J. G. Noble; treasurer, Payne Chapell.

Mr. James Adams, who was a delegate to the State meeting, made a report of his observations on that trip. He was well satisfied with the work of the meeting, particularly with the speech of Gov. Rich, and the portion wherein he recommended the taxing of salaries of those who now escape taxation entirely. He spoke of the joint meeting with the State Grange as showing

the good will of each for the other, and the similarity of purpose. He thought Prof. McDermott was working along the right line in regard to balanced rations for human beings.

Mrs. Adams also attended the meeting at Lansing, and gave an account of the State institutions located at Lansing. The school for the blind is conducted in a systematic manner, and the work being done there is a credit and honor to the State. One gets a favorable impression from a visit there.

The Industrial school, with its six hundred boys being disciplined and educated for useful pursuits in life, she mentioned, and praised the choir from this school that sang at the Association meetings. Many of the boys who have gone out from that school are filling places of trust and responsibility, and are reflecting great credit on the school. Those who are seeking a way to lessen the tax burden can easily find more proper subjects than these two schools. Mrs. Adams also read a report of the Superintendent of the Industrial school, which should be read by every taxpayer. Statistics show that only one in fifty of the inmates of the latter school are from the farms.

Her trip to the Agricultural College was too hastily made to enable her to give a satisfactory report. It is too great an institution for a person to look over in a few hours and be able to comprehend its usefulness.

The Association question, asking if every third one of the State questions shall be made of special importance to the ladies, was opened by Mrs. J. G. Noble. She was very strongly in favor of the plan. She felt that the women were a benefit to the club, and also claimed the club was of great use to the ladies. The social relations were cheering, the discussions interesting. She said that if the women did not bring great wisdom to the meetings they at least brought cake. She thought the new department at the College, where the girls of Michigan could be educated in the practical ways of household duties, including dress-making, millinery, hygiene, etc., added greatly to an institution already useful to the people of Michigan. The plan was generally discussed, and on motion of Mr. Cowdin it was unanimously voted that the plan ought to be put in operation.

A communication from Rev. G. C. Squire, of Mayville, secretary of the Orion Assembly, in which he asked the club to co-operate with the management to secure a successful farmers' picnic on their grounds August 21st, was read, and it was voted to act with the assembly to that end.

The next meeting will be held in the tornado district, at the new home of Albert Jones, near Oakwood. He has recently moved into his new home, and the club will dedicate it on the twenty-seventh inst.

REPORTER.

SOUTH FULTON CLUB.

This club met at the home of Mr. and Mrs. Jno. Rice, on Feb. 11th, with the members nearly all present.

W. L. Herman read a paper entitled The Sunny Side of Farm Life, at the forenoon session. After the social intercourse of the dinner hour, came the discussion of the above paper.

Mrs. Payne thought farm life the life for pleasure and independence.

Mr. Conley said it required nerve to picture the bright side during this time of depression and stagnation of business.

Mrs. Hoxie said one could pay taxes and succeed by being economical.

Mr. Bridgewater thought the dinner indicated the bright side.

The question box was then opened, which brought out some profitable ideas.

After this the question for discussion, What occupations are detrimental to farming? was extensively considered. The general trend was that farmers, by not organizing and looking after their own interests, were more detrimental to farming than were those engaged in any other occupation.

The meeting adjourned to meet with Mr. and Mrs. Arthur Stead, the second Thursday in March.

F. H. CONLEY, Cor. Sec.

MEDINA FARMERS' CLUB.

This club held its February meeting the 13th inst., at the new Grange hall, by invitation of the Lime Creek Grange. Over two hundred were in attendance—the largest meeting ever held by the club.

A most excellent program was thoroughly enjoyed by all.

A paper on "Our Common Schools" by Mr. John Poucher, was an admirable presentation of our common schools as the very corner stone of the Republic. Patrons were severely arraigned for culpable lack of interest and oversight. His advocacy of the township unit system called forth remarks pro and con from Prof. Keeler, County Superintendent of Schools, and others.

After dinner the discussion of the school question was resumed and participated in by many members.

A paper, "How should the Farmer Honor His Calling?" by Albert Deyo, followed. This was such an exhaustive treatise, so complete and replete with wit and wisdom, that no abridgment can do it justice. By resolution it was requested for publication in local papers. Remarks on the subject by the president followed, advocating free rural mail delivery as one way to magnify our calling.

Rev. Seibert remarked on the emigration of boys from farm to city, which he thought a result of failure of parents to magnify their calling, which view was supported by the County Superintendent and others.

Then followed the ladies' paper, The Wayside Gleaner, which was pronounced by some to be the best number yet published.

This was followed by the adoption of a resolution declaring that every third meeting should be mainly devoted to some subject of particular interest to the ladies.

C. A. JEWELL, Cor. Sec.

Veterinary Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case fully; also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of fifty cents must accompany the letter.

G. W. R., Portland, Mich.—If you have any cattle afflicted with lump jaw, fatten them. If they have no suppurative trouble their flesh is fit for use.

A. N. M., Eaton Rapids, Mich.—Put your cow in a stall where her hind quarters will be four inches higher than her fore. Apply acetate of lead one ounce, water one quart to sore parts twice a day.

ECZEMA.—My mare itches on side where harness chafes. She bites her side fiercely, and keeps it raw. Is it eczema? How should I treat it? J. M. Hudson, Mich.—Apply oxide of zinc one ounce and vaseline five ounces to sore parts of skin twice a day. Give one dram Fowler's solution of arsenic three times a day.

FEEDING MILLET HAY TO HORSES.—Will it do any harm to feed my stallion millet hay? It was cut green, while in the blossom, but I heard a few days ago that it was not good for a stallion. What is the best method of feeding him? J. R. J. Duffield, Mich.—I think you had better not feed large quantities of millet hay to your stallion. I like timothy better. Also mix wheat bran with his oats. A few carrots are good for him.

PNEUMONIA.—I have an 1,100 lb. steer that appears to be sick. He refused to eat last Friday night and was shivering; ran at the nose and coughed some, but appears to have got over that. He breathes heavy and quick, and is very dull. His digestive organs, so far as I know, are all right. E. L. G., Plymouth, Mich.—Apply mustard and water over sides. Give twenty drops tincture of aconite for two days, then give twenty grains quinine and half an ounce compound tincture of gentian three times a day.

STOMACH STAGGERS.—I have owned a six-year-old horse about four months and never knew him to be sick; while driving him recently he commenced to tremble, his muscles became rigid and he was unable to go ahead; kept turning in a circle. Afterwards his eyes became bloodshot and he seems unwilling to move. S. G., Springfield, Mich.—Feed your horse less grain. Keep his bowels loose and drive him daily. Give one dram ground nux vomica, one dram sulphate of iron and one dram nitrate of potash in feed twice a day.

SORE SHOULDERS—SWOLLEN KNEE.—A mare has sore shoulders, caused by using sweat pads and not taking proper care of her shoulders. Have healed them up, but there are two good-sized bunches of proud flesh remaining. Will you please tell me how to take them off without cutting them? Also have a mare that was kicked on the side of the knee by another horse and it has produced a swelling and has made her lame. C. B., St. Johns, Mich.—Mix one ounce sulphate of zinc, one ounce acetate of lead and one quart water. Apply to sore shoulders and knee three times a day.

GREASE HEEL.—A gelding six years old weighs fifteen hundred. When standing in stable over night his hind legs swell. There have been dry scabs just above and below his fetlocks since last fall, and now there is a crack above and below on one leg. Have been feeding cornstalks and corn until about a week ago, and now I feed good hay and oats. Have been greasing heels with lard and carbolic acid lately. S. E. V., Victor, Mich.—Clip hair off sore parts of leg and apply pine tar once a day. Give two drams nitrate of potash three times a day in feed; also feed plenty salt and bran mashes.

PARTIAL PARALYSIS.—We have a fine brood sow about two years old. She has had a good comfortable house with other sows and is allowed to run out in yard at will. Has been fed a variety of roots, bran, middlings and corn with salt and ashes regularly. She appeared to be in fine condition until a few days ago when she was discovered going about on her knees; she stands on her feet only occasionally. What is the difficulty and what the remedy? P. F. C., McDonough, Mich.—Your sow has partial paralysis. Feed her less grain. Keep her bowels and kidneys acting freely. Apply equal parts alcohol, tincture capsicum and water to parts that are paralyzed. Give one teaspoonful powdered nux vomica in feed three times a day.

OBSTRUCTED TEAT.—I have a three-year-old graded Jersey and Durham heifer which I have milked the past season. One of the front teats gives only what milk can be obtained at first drawing; then it remains empty until next milking. It appears all right, only the milk will not flow while milking after the first is milked out. Is there any remedy for this? I intend to dry her off soon as she is coming in again in April. W. S., Lamb, Mich.—You had better use a milking tube. Apply tincture of belladonna to quarter of udder affected twice a day. Hand rubbing will prove beneficial.

New Shrub that Cures Disease.

A Strange Botanical product with peculiar effects upon certain Diseases of the Kidneys, Rheumatism, etc.—Free to our Readers.

The discovery of Alkavis, the new product of the Kava-Kava shrub, or as botanists call it *Piper Methysticum*, and the many accounts of its wonderful properties are exciting much attention in medical circles, as well as among sufferers from diseases of the Kidneys. Leading doctors now declare that Alkavis performs its remarkable cures by removing from the blood, the uric acid, which is the cause of these diseases. Alkavis also acts directly upon the kidneys and urinary organs, soothing and healing them. It will be remembered that this new remedy was first found in use by the natives of India, where on the marshes of the Ganges river, they are peculiarly liable to diseases which clog up the kidneys and load the blood with the waste products of the system. White missionaries, soldiers and natives alike suffer. Then when death seems at hand, the native finds in a decoction of the Kava-Kava Shrub the natural remedy which sets the kidneys in healthy action again, and clears the system of disease. It is this special action on the kidneys which makes the value of this new botanic discovery and has given Alkavis its world-wide reputation.

We are glad to give the record of the following most remarkable cures by this new discovery. The noted Evangelist, Professor Edward S. Fogg, the associate of Talmage, Jones and Moody, so well known for his work in conducting revival and religious meetings over the United States, in the following lines tells the story of his recovery from serious Bladder and Kidney disease, through the wonderful curative power of Alkavis. He writes from Covington, Ky., Jan. 7, 1897. He says:

"John Wesley once said that the man who discovered a Remedy for Disease and did not make it known to the world merited condign punishment. I believe I have found a Remedy for Kidney disease in the new discovery, Alkavis. I have used it but little over a month, and I am in better health to-day than for years previously. It has been matter of remark to my friends of the wonderful improvement of my condition in the last few weeks, and I ascribe it entirely to Alkavis. You know how much I suffered, and the very bad condition of my Kidneys and Bladder, all of which has now happily passed away under the use of this great Remedy."

Very truly yours, EDWARD S. FOGG.

The venerable Mr. Jos. W. Whitten, of Wolfboro, New Hampshire, gratefully writes of his cure of Dropsy, swelling of the feet, and Kidney and Bladder disease by this new remedy. He writes:

"After suffering two years with Urinary and Bladder trouble I sent for Alkavis, and it helped me very much. I am eighty-five years old and my blood and circulation were so poor that my feet and limbs would swell very badly. Since taking Alkavis my blood is in a healthy condition and my feet and limbs do not trouble me by swelling. I was very thin, but now I weigh one hundred and thirty-six pounds. I can truly say that Alkavis was a great blessing to me and I can recommend it faithfully."

Rev. Albert R. Richardson, D. D., pastor of the First Methodist Church, of Hoboken, New Jersey, writes of the recovery of his daughter from an apparently incurable case of Bright's Disease through Alkavis. Rev. W. B. Moore, D. D., of Washington, D. C., Editor of the *Religious World*, writes of his own cure of Rheumatic and Kidney disorders through Alkavis. Rev. John H. Watson, of Sunset, Texas, a minister of the gospel of thirty years' service, was struck down at the post of duty by Kidney disease. After hovering between life and death for two months, and all his doctors having failed, he took Alkavis, and was completely restored to health and strength, and is fulfilling his duties as minister of the gospel.

Mrs. L. D. Fegely, of Lancaster, Ill., testifies that Alkavis cured her of most severe Kidney and Bladder disease of eight years standing, after three doctors had failed. Mrs. James Young, of Kent, Ohio, writes that she had tried six doctors in vain, that she was about to give up in despair, when she found Alkavis, and was promptly cured of Kidney disease, and restored to health. Mrs. Alice Evans, of Baltimore, Md.; Mrs. Mary A. Layman, of Neel, West Va., twenty years a sufferer; Mrs. Sarah Vunk, Edinboro, Pa.; Mrs. L. E. Copeland, Elk River, Minn.; and many other ladies join in testifying to the wonderful curative powers of Alkavis, in Kidney and allied diseases, and other troublesome affections peculiar to womanhood.

Mr. F. Starkweather, of Hayesville, Iowa, writes that he would have been in his grave but for Alkavis. He says that he was taken with bleeding from the Kidneys and Urinary Organs, that he was given up to die, and cured by Alkavis. Mr. R. C. Wood, a prominent attorney of Lowell, Indiana, was cured by Alkavis of Rheumatism and Kidney and Bladder disease, which had compelled him to rise as often as ten times in a night, and made life continuous suffering.

While Alkavis is well-known in Europe, its only importers in this country so far are The Church Kidney Cure Company, No. 418 Fourth Avenue, New York. They are so anxious to introduce Alkavis and prove its great value that they will send free one Large Case, prepaid by mail, to Every Reader of THE MICHIGAN FARMER, who suffers from any form of Kidney or Bladder disorder, Bright's disease, Rheumatism, Cystitis, Gravel, Female Complaints and Irregularities, or other affliction due to improper action of the Kidneys or Urinary Organs. We advise all readers to send their names and address to the company and receive the Large Case by mail free. To prove its wonderful curative power, it is sent to you entirely free.



Mr. Jos. W. Whitten, Wolfboro, New Hampshire.



Mrs. L. D. Fegely, Lancaster, Ill.

Miscellaneous.

DECEIVERS EVER.

Carey Churchill Carter Channing, first lieutenant, Nth cavalry, died so long ago that most of his story is forgotten, although it was a very great wonder at the time. Everybody connected with it is dead also—his mother and the other two women—and so many first lieutenants have filled his place since then that no one's heart is likely to be wounded by repeating it.

He was a superb great fellow—as all the men in his regiment were said to be in those days—of the big, blonde, and brave type, knowing neither fear nor failure, and his fascination was something that has become a tradition in the service. So many girls—aye, and married women, too—had loved him that the shores upon which he had touched were strewn with wrecks.

The hearts of all those women had been broken, not just dented a little, as is usually the case in such affairs; their lives were openly ruined, yet Channing kept himself free from blame. No one could say "he should have done thus or so," he never committed himself, he never acted in a compromising fashion in the presence of a third person. But the women who ran insanely on into the desert of disillusion, following the elusive pillars of the smoke of his words and the fire of his looks, never again passed beyond into the land of content across the wilderness. They despised themselves in that pitiful fashion that women have, but they loved him always—for such is the way of their kind.

It had been his good fortune to have dealings only with women who either thought of him alone, forgetting themselves, or with those too gentle to denounce him. Then, too, he had managed well; there was never any definite proof. But in the early summer of '85, the pitcher that had been carried ninety-nine times to the well narrowly escaped being broken.

The bride of Capt. Morton, having seen fit, with due encouragement, to fall in love with him, threatened to become unmanageable. She was a most wonderfully attractive feminine little thing, but she was neither of the self-immolating nor of the concealing sort. Having lost her heart, she lost her head, and Channing was in much danger of having his methods exposed.

His captain advised him, "Channing, you'd better take a leave and get out for a bit."

"Why?"

"Well, it's a delicate subject, but Morton's an old friend of mine, and I don't want to see his wife disgrace him."

"But what have I done?" I am as innocent as a baby; and besides, I think you are mistaken."

"We all exonerate you. It's not your fault; but I'm not mistaken. It's evident to the whole post. Take my advice and go see your mother, like a dutiful son."

Channing was flattered, but he was also frightened; nevertheless, he was undecided.

There was a hop the same night. Mrs. Morton was there, and it was her actions that determined Channing to take Capt. Lytton's counsel. She was already in the hop-room talking to the latter when Channing appeared, and the moment she saw him, standing tall and graceful and indifferent in the doorway, she grew so white that the whole room noticed it, and she trembled visibly. She realized her paleness and knew that Capt. Lytton's quick movement to put himself between her and the watching eyes had been unavailing.

Her own soft eyes filled as she raised them piteously. "You see what a spectacle I am making of myself. I can't help it. I've tried hard. There's nothing for it but to go away or break down."

"Poor little girl! Come away, then."

"If you will just take me home, and tell Dan I—"

she stopped, losing the thread of her words, for Channing was approaching.

Capt. Lytton offered her his arm. "Come quickly," he said.

"Just wait a minute, please—just till I tell Mr. Channing I can't stay for our dance."

She had flushed up and her eyes were brilliant. She put out her hand to Channing, drew it back, and again stretched it forth, confusedly.

He took it and pressed it—yes, she was sure he pressed it, almost. "The third you promised me, wasn't it?"

"Yes, I think so," she answered.

Capt. Lytton turned on his heel and walked away.

At the end of the third dance, while they strolled together up and down the line, Channing experimented to see how far she would go. To his consternation he found that she would stop at nothing short of blazoning her infatuation from the house tops. A scandal was not what Channing wanted. He was very gentle with her, but she wept and said all manner of foolish things, until Capt. Lytton came upon them and took her home.

Very soon after this the lieutenant went on to visit his mother. She was a Virginian, of the conventional poor but proud order; and she lived on what was once the kitchen garden of the family estate. Quite as often as not she was on the point of hunger, when there was no demand for the needlework of her quivering old fingers. Her son did not contribute to her support. "All of my beggarly pay, and more, too, goes to keep up appearances. My regiment is great on esprit de corps. I'd like awfully well to help you, mother, but I must hold up my end of the row. I am a Channing." And she loved him all the better.

While he was with her in the summer of

'85, through sheer lack of excitement he became enamored of a certain Anna Trafford. He asked her to marry him—quite the last thing he would have expected himself to do—and she, being completely fascinated, consented without even a decent amount of hesitation. It was arranged that in the late fall she should join Channing at the town nearest his post, and there be married.

In September, the unhappy Mrs. Morton having gone hopelessly away to another garrison, the lieutenant rejoined his regiment.

In November, giving way ungraciously enough to Anna Trafford's pleadings, Channing granted her permission to join him at the railroad town. She was very poor. Generally she was considerate and self-sacrificing. Now she clamored, and would not be quieted until a mortgage was raised on the wretched little house that was all in the world her mother and crippled sister owned. She bought her ticket with the money, and ten days after the receipt of Channing's letter she was at the meeting place—alone.

She spent a day and two nights in the mean little depot hotel, very nearly out of her mind with loneliness, fright, and at last an acknowledged distrust. Then Channing's mother arrived, and an officer met them with an ambulance. He was suffering with a fever, the mother told her. The doctor had telegraphed for her, without her son's knowledge, the day after the girl had left the village. Then Anna reproached herself for her suspicions with unreasoning bitterness.

The drive to the post took two days. It was a horrible experience for the officer. The road stretched on, on and on, across desert and bad lands, where even the greasewood and mesquite were burned by the terrible sun.

The beautiful daughter of Col. Ross was standing by Channing's bed alone, when the doctor led the mother and her young companion in. The lieutenant had been dead twenty minutes. The dark-eyed woman did not turn; she had forgotten everything in all the world save only Channing's face. When the southern girl dropped down at the bedside and screamed for her husband, she started.

"Is the poor thing crazy?" she asked dully of Mrs. Channing.

"No. But she was not married to him. Only she was to have been married at Santa Maria two or three days ago; I forget when. He sent for her."

"That can't be true, because I am his wife."

Mrs. Channing caught at the bedpost with her shriveled old hand. "Nonsense," she said.

"Indeed, it is true. Aren't you his mother?" She put her arm tenderly about the bent shoulders. "I thought you were. You look like him. He and I were married last night at midnight, when they told us he was going to die."

"Anna! Come away, Anna! You've no right there. Get up. This girl's his wife. He didn't love you. He married her. He married her—last night."

It was cruel, but Mrs. Channing had gone mad.

For five years afterward Col. Ross cared for the insane mother of his daughter's husband—even when his daughter was dead.

But until Channing was buried in the graveyard on the hill, where the coyotes dug up the mounds at night, and the prairie-dogs barked shrilly, and the snakes glided along the dry, baked earth into their holes—until he was buried there, the two women staid by her. Their trust in the dead man never faltered. The girl believed he had been ensnared on his death-bed; the wife that he had never loved the childish, pretty Virginian. Yet neither—out of pity—spoke her convictions.

Watching over his mother, they sat in the room where he had died, and listened to the thud of the soldiers' feet as they marched by outside, following the young officer's flag-covered coffin. Then there was a long, long silence. They were wide apart—the wife, with her beautiful head in her hands; the girl, looking straight at the wall; the old woman, muttering and scratching at her gown with her crooked fingers.

At last came the sound of a far-off volley of musketry. The girl jumped up.

"What's that?"

"The firing over his grave."

In a moment it came again. The girl stood swaying, the wife sat with her head still bowed. It was no new sound to her.

A pause—then the last volley. The girl fell, and the woman, lifting her head, stared stupidly at the pretty, dead face, at the fixed, childish eyes, that still looked hurt; while the mother muttered in the corner and tap! shrilled from the bugle over the grave of the man they had loved.

—San Francisco Argonaut.

NAVAJO BLANKETS.

Exactly the most perfect blanket. Neither Ottoman fingers nor British machines have ever produced its peer. The only thing I know of to surpass it is to be found among the astounding prehistoric fabrics we have exhumed in the mummy mines of Peru, but they are not blankets. And this matchless weaving is the handiwork, not of some Old-World craftsman, not of a trained heir of civilization, but of a wild nomad, a dirty, foxy, barbarian denizen of a corner of the "great American desert."

The Navajo Indian of New Mexico and Arizona cannot vie with the modern Turk in rugs, nor with the extinct Yonca in fringes, but when it comes to blankets he

can beat the world. Or rather, he could—for it is nearly a generation since a Navajo blanket of strictly the first class has been created. Here is a lost art—not because the Navajos no longer know how, but because they will no longer take the trouble. They make thousands of blankets still—thick, coarse, fuzzy things which are the best camping blankets to be had anywhere, and most comfortable robes. But of the superb old ponchos and zerapes for chiefs—those iron fabrics woven from vayeta (a Turkish cloth imported especially for them, and sold at six dollars a pound, unraveled by them, and its thread reincarnated in an infinitely better new body), not one has been woven in twenty years. It is a loss to the world, but the collector who began in time can hardly be philanthropist enough to lament the deterioration which has made it impossible that even the richest rival shall ever be able to match his treasures.

There are still Navajos, (twenty thousand of them), and there is still vayeta, and as there are people who would give five hundred dollars for an absolutely first-class vayeta blanket, you might fancy that the three things would pool. But that is to forget the Navajo. He is a barbarian, to whom enough is an elegant sufficiency. By weaving the cheap and wretched blankets of to-day—wretched, that is, as works of art—he can get all the money he desires. Why then toil for a twelvemonth over a blanket for five hundred dollars (which is more coin than he can imagine, anyhow) when a week's work will bring five dollars?

The art of the Navajo blanket is as old as Plymouth Rock—and almost as bigoted. You can tell a genuine just as far as you can see it. It is a curious fact, known to the student, that, when left to himself, the Indian never blunders in color. It is only when too long rubbed with our shoddy civilization and poisoned with the ease and cheapness of our accursed aniline dyes that he perpetrates atrocities. His eye for color is elemental and absolutely correct. Red is king—and no bastard magenta, mauve or lake, but true red. Blue is good, because it stands for the sky, and green, because it is the grass; and yellow for the sun, and white for the clouds and snow—and these are the only colors found in a strictly perfect Navajo blanket.

To the Indian, color is a part of religion, and purples and pinks and other devil's colors he never can use until he is fully corrupted. The blanket of to-day is the most graphic witness to the falling off of the aborigine that ever came into court. It is full of hues that any decent Indian knows to be literally infamous. A generation ago a Navajo would have been put to death by his people if simply found in possession of one of these witch colors. But the true old blanket was as perfect in its color scheme as in its weaving—and I have blankets which have for seventy-five years done duty on an adobe floor.

Of course, at all times these gems were comparatively few. Not every Navajo weaver was a master, and not so many could afford a blanket whose thread cost six dollars a pound as could "stand" the

natural wool at thirty cents. But what has done most to make the old-time perfect blanket scarce is the fact that it was almost invariably buried with its owner. In the Christain graveyards of the Pueblos, in the barbaric lonely lost cuddling-places of Navajo captains, the vast majority of the perfect blankets have gone to the worms. I myself have seen ponchos not three collections in the world could match to-day, swathed about the corpse, and covered with six feet of earth; and you can fancy if that would make a collector gnash his teeth.—Land of Sunshine.

VARIETIES.

MR. SMITH, an English traveler, arrived one evening at a hotel in Austria. On the way he had picked up a smart German and hired him as a servant. In Austria every one staying at a hotel is obliged to register his name and occupation in a book, which is kept for police examination, so Mr. Smith told his servant Fritz to bring this book for him to write his name.

"I have already registered, milor," said Fritz, "as an English gentleman of independent means."

"But I've never told you my name, so how do you know what it is?"

"I copied it from milor's portmanteau," answered Fritz.

"Why, it isn't on my portmanteau," cried Mr. Smith; "bring the book and let me see what you have put down."

The book was brought and Mr. Smith, to his amusement, discovered that his clever servant had described him as:

"Monsieur Warranted Solid Leather!"—Gripsock.

AN Irishman was smoking a cigarette. A dude who was smoking a pipe happened along.

"Well, deah boy, I am surprised," said the dude. "I didn't think an Irishman would smoke a cigarette. Have a cigar?"

"Oim much obliged to yez, but I'd rather have th' cigaroot," returned Pat, inhaling the smoke and blowing it out of his nose, eyes and ears.

"Well!" gasped the dude. "This is astonishing! Cawn't I lend you my pipe, then?"

"No, t'anks. Oi used to smoke a polpe, but Oi'll never do it again."

"What made you quit?"

"You see, I worked in a gunpowder factory. Wan day Oi was in a storeroom where they had 500,000 pounds of new powder laying around loose. Oi was smoking me polpe, and th' thought that Oi had to put away all that powder before 6 o'clock made me shmoke too fast. Me polpe got red hot and fell on th' flure. The powder caught fire and burned up two bushels before Oi could put it out."

"From that day Oi swore Oi'd never shmoke a polpe again. That is phy Oi shmoke cigaroots."

CAUGHT WHILE HERDING IN COLORADO.

Clung to Him while a Commercial Traveler in the Middle West, Notwithstanding all Efforts to Get Rid of it. Hot Springs of Arkansas of No Avail. Cured by Dr. Williams' Pink Pills.

From the Chronicle, Chicago, Ill.

Mr. William Clement, of Freeport, Ill., is a well-known commercial traveler, and represents the large Chicago house of Reed, Welsh & Lange. In his early life Mr. Clement migrated to the breezy West and became a cowboy in Colorado. After doing as much at cow punching as he desired, he turned his attention to mining, the exposure from which and his life on the plains undermined a once strong constitution, and rheumatism, liver and kidney trouble and dropsy made their unwelcome appearance.

The Hot Springs of Arkansas were visited in the hope of relief, but he was disappointed, and so he took up his residence in Illinois, and obtained employment as a drummer for a large house in Chicago that has long since gone out of business. Physicians were consulted both at home and while on the road, with only pecuniary benefit to the doctors, for Mr. Clement grew worse instead of better, and constantly had to lay up for weeks at a time.

It was then that from reading the advertisement in the papers the sufferer conceived the idea of trying Dr. Williams' Pink Pills for Pale People, and did so.

"I thought," Mr. Clement said to the reporter, "that fifty cents would not be much expenditure, so I bought a box of the pills and began taking them according to directions.

"I had not to wait many days before I found a marked improvement in my condition, so I kept on with the treatment. First my kidneys began to do their work thoroughly and well, and all blot left me. Then the rheumatism and pain in the region of the heart went, my liver is cured, and I may say I am as well as ever I was. If I had only known of Pink Pills a few years before, I should be a good many thousand dollars richer."

As usual, when such testimonials are received at the office of Dr. Williams' Medicine Co., they are sent for verification to the leading druggist of the vicinity or other persons in good standing. The above was not an exception, notwithstanding Mr. Clement's excellent reputation, and the returned reports certified that all of the foregoing statements made to the reporter were strictly true.

Dr. Williams' Pink Pills contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail from Dr. Williams' Medicine Company, Schenectady, N. Y.

LEARN TELEGRAPHY.

Write for Catalogue
DODGE'S
INSTITUTE.
Valparaiso, - Ind.

The Dairy.

For the Michigan Farmer.

NOTES FROM A MICHIGAN DAIRY FARM.—No. 1.

There are but few lines of farming which to-day offer better opportunities for the intelligent and careful man than dairying.

While the market is not so good as in former years, neither is the cost of production so great. With cheaper food stuffs and improved methods of manufacture it is quite possible to still make a good profit, yet in order to do this the entire business must be run on business principles, and close attention given to details. Much depends upon this.

Do you think the average farmer with his four, five, or even ten cows makes anything out of them at the end of the year? If he manufactures butter at home, after old-fashioned methods, depending upon the general market as a selling medium, most assuredly he does not.

It requires more money in receipts than he will get out of their butter to pay their keep, to say nothing of anything else. To succeed in making a profit from the dairy in the year 1897 there are several things needful to be carefully studied.

First, the cow. She may be of any breed, a sort of general purpose animal, answering the same description as the man who is "Jack-of-all-trades," and quite likely to prove master of none, yet it is the specialist in any line who best succeeds. So we claim with the cow; she must be a specialist.

If we are to make butter, let our selection be a Jersey or a Guernsey. They will put the fat where it belongs, in the pail, rather than upon themselves. They will yield it back to us rather than hoard it for some day in the dim distant future when it shall be placed upon a butcher's block.

Not that I would claim that there are not excellent butter-producers among the other breeds. I know there are, but these two stand out pre-eminently as butter breeds, cows bred for generations with this end in view, the production of rich milk.

"But," says the young farmer, "I have no money with which to purchase Jerseys or Guernseys. I believe them to be what I need, and I know they are what I want, but I cannot afford to buy them."

By a system of breeding, only a few years need elapse before you will have a most excellent herd from stock now on hand without a cent of extra expense.

In almost every neighborhood there is kept a Jersey bull. The Jerseys are not so common, but the service fees are now as low as we can ask, even for the best animals. Breed your cows, common or native though they be, to such an animal, and the next year do the same, and the next, and the next. Always choose a full blooded sire; accept no other.

In three years from the time you begin you will have helpers from this breeding in milk—that is, if you get helpers. If you get bulls, dispose of them in some way, do not under any circumstances keep one of them for breeding purposes, no matter how well he may look or how finely colored. Remain firm in your decision to use none but thoroughbred males.

While a pedigree is not to be despised, yet many a cow without one can do better work than another with one, and your half-blood Jersey helpers will probably astonish you, both by their appearance and by their performance. The general appearance usually follows after the sire, many of the animals of the first cross, both male and female, showing every indication of the Jersey blood. It is strong, and almost without an exception brings yellow skin, curving horns and good udders.

The writer started eight years ago with one thoroughbred cow (bought when a calf) and one grade. From these and a few native cows, which he had at the time, he has raised and grown to maturity over 50 head of females, aside from the numerous bulls dropped, and not one cent more has been expended upon them in any way than would have been required to rear the same number of scrubs.

This herd averages, with 35 in milk, over five per cent fat by the Babcock test and well up towards 300 pounds butter per cow, 12 of them two-year-olds.

The pleasure to be derived from a herd which you see growing up under your own eye from calfhood to maturity is considerable, I assure you. Perhaps it would not be greater were they all pure bred animals.

After the cow comes the feed. Some might place the cow second on the list, giving feed first, but I have found it safe to depend upon a judicious selection of cow, basing success less upon the feed, although freely admitting the closeness of the claims.

Feed plays an important part in deciding upon which side of the books the balance falls; no one can deny that. The best cows will fail if denied the food which they require to make milk with, and it must be supplied ungrudgingly, lavishly, at that.

While much depends upon quantity, more depends upon kind, as some feed-stuffs are almost totally lacking in the properties needful to supply a good flow of rich milk. An example of this is found in timothy hay.

Clover is most excellent for milch cows, yet with a growing scarcity of this crop from year to year, and an abundance of corn fodder, it is wisdom to utilize the latter, since practically the same results can be derived from this when fed judiciously. Then, too, clover hay has a con-

siderable commercial value while corn fodder has none or very little.

I have no wish to say anything which may be construed as unfavorable to ensilage, yet it is not indispensable. That it furnishes a good and cheap food is true, and few who have given it a trial are against it, yet in view of the fact that a very small proportion of our farmers have silos, nor the money with which to build them, it will be my effort to show how to make the most of our immense crop of corn stover, much of which in former years has been entirely wasted. This will form the basis for our next talk.

GENESEE CO.

W. C. ROCKWOOD.

For the Michigan Farmer.

LICE—BUTTER COLOR.

Having seen the question asked in the MICHIGAN FARMER how to kill lice on stock, I will say I have tried different remedies, but the best remedy I can get is quassia chips.

You can get them at any drug store. Put a little water on them and steep, then put a little on the back and around the head of each animal. It is clean to use, is a sure cure, and not expensive. Two applications will fix them.

I would like the law in regard to using butter color. Is there any law against coloring butter? How about butterine and oleomargarine? We are having a discussion in regard to this matter, and if you will please answer through your paper I will be much obliged to you.

I think the FARMER grows better every year. C. C. J.

CALHOUN CO.

[There is no law prohibiting the coloring of butter, oleomargarine or butterine.

An effort is being made to secure the passage of a bill, in the legislature, to prohibit the manufacturers of imitation butter from coloring the stuff in the semblance of yellow butter.

A clause of this kind was inserted in the pure food bill gotten up two years ago. It was utterly impossible, at that time, to secure the passage of the pure food bill with the color clause attached, and it was dropped by those who had the matter in charge. Now we sincerely hope to see the color clause added, by the present legislature.

It is only because the manufacturers can color their imitation products in the semblance of yellow butter that they sell such enormous quantities.—Ed.]

MARKETING FARM BUTTER.

I have read with interest all that has come under my observation on this subject and have not yet found anything that gave any light to those that need it. The only advice given is to sell to private customers. This, however, is impossible for the great majority of this class of butter makers. The situation is simply this: Every good farmer's wife aims to supply her own table with good butter. She will take just as great pains to make what she expects to use as she would as if she was making a large amount for some fancy trade, always remembering that there must be a difference in quality in favor of the greater quantity made. To do this she must aim high enough to cover the entire year, and thus she will have a surplus at some season of the year. The amount is too small to pay for the drive to a special market, even if there was one within 8 or 10 miles. Private customers are not plenty in our country towns, who pay you more than the retailer's margin upon the price at the store. I thought by giving our experience we could be of some help to that class of dairy women.

For many years we were patrons of the cheese factory, and took the ups and downs in prices with our fellow patrons, until the fall of 1893, when we concluded that we could do better by making butter and selling to private customers. We had no trouble to contract for the winter, to the first of April, at 25c per lb. A butter shipper said it had never been done in that town before. It was to be an experiment both on our part and with our customers. We had 8 miles of a drive, every week, rain or shine.

We soon learned that there was not enough demand for butter at that price to pay us for the time and trouble. We learned one thing, however, that was of some value, viz: that our butter was all right. This same butter shipper offered us no less than 16c per pound, and when the market went above that we would get the advance.

This opened a new thought in our mind. If he can ship our butter at that price why can't we ship it ourselves? We are only 1½ miles from the express office, and 8 miles from his office. We sent to one of the manufacturing firms for small packages and had one sent by mail as a trial package. We filled it with butter and paid express on it to our nearest city market, as a sample. We received a favorable reply, and after the first of April shipped our first lot to the city.

Our anxiety, mingled with fear, while waiting, must be experienced to be appreciated. All we had ever heard about the dishonesty of railroad employees and city merchants came to our memory. But in a few days we received a postal card stating: "Butter received. You are credited at 23 cents per lb. Butter scarce in this market. Send more soon." Butter here was worth 12 cents, and we felt all right. We have been

sending that firm our butter ever since and have not lost one pound nor one penny.

This summer we shipped them our eggs, also, at a good profit above what we could get at home.

Last spring we persuaded a young man just starting into the buying of butter and eggs, to try our two-pound paper packages. We let him have some to make the trial and it was not long until he had a good market for all he could get of that class of butter. He would leave some empty packages at each house as he took up the full ones. On each package was pasted a label: "Manufactured for — by —." He paid them two cents extra for their work and sold it on orders at a fair margin, while all other butter bought on the road was handled at a loss to both parties.

The advantages are apparent at once. The maker gets two cents at home. She is accustomed to see the manufacturer's name on everything she buys, but to see her own name go before the public as such, looks altogether different. This will spur her up to her best efforts. The butter will reach the consumer just as it left the maker's care and in a much shorter time than the old way.

Another plan would be for a few neighbors to unite and ship together. One should have no less than 30 lbs per week, or in at least ten days, to ship. They should, however, agree on some one system of making their butter so as to have a uniform quality as near as possible.

While there is still much butter made that is inferior, there is also a great amount made that is good, but the methods used in getting it to market are all wrong. We need a radical reform in this line of business. The market is waiting to receive it. Consumers are fast becoming educated in taste for the better article. The manufacturers of these cheap small packages should advertise more frequently in our farm papers.

ASHLAND CO., O.

JOSH. EIDT.

For the Michigan Farmer.

SORGHUM FOR COWS.

In reply to your question as to whether I had ever raised sorghum in drills, would say that until this year I always raised it in drills three feet apart and cultivated like corn.

I think it the very best feed for cows; they never leave any butts, as they do with corn fodder, but they do not eat it readily until the seeds have ripened.

I should prefer sowing as I did this year, if it were not for harvesting it. It grows so tall that the reel on the binder will not raise high enough to clear, and therefore bothers very much. It might not if sown thick enough.

W. N. TAYLOR.

[Let us hear from others who tried sorghum growing and feeding last year to milch cows.—Ed.]

"Mend it or End it,"

has been the rallying cry of reform, directed against abuses municipal or social.

For the man who lets himself be abused by a cough the cry should be modified to: Mend it, or it'll end you. You can mend any cough with

Ayer's Cherry Pectoral.

De Laval "Baby" CREAM SEPARATORS.

"GEORGIA EXPERIMENT STATION, Experiment, Ga., Jan. 8, 1897.

After several years experience in the use of a De Laval "Baby" No. 2 Separator at this Station, I am thoroughly well pleased with it. I consider such a machine indispensable to the creameryman or dairyman, and even to the owner of a few cows. If I had only four or five cows I would certainly use the separator. I do not see how a dairy farmer with a larger number of milch cows can manage to get along without one. It increases the quantity of butter recovered from the milk, improves the quality very much, enables the farmer to make the most profitable use of his skim-milk, and greatly simplifies the handling of the milk in all respects.

R. J. REDDING, Director.

Send for "Baby" Catalogue No. 246.

THE DE LAVAL SEPARATOR CO.,
RANDOLPH & CANAL STS., CHICAGO. 74 CORTLANDT STREET, NEW YORK.

ENGLISH BRANCHES

Arithmetic
Spelling
Penmanship
Grammar
Letter Writing
Geography
U. S. History
U. S. Civ. Gov't
Book Keeping
Algebra, etc.



TO WORKMEN BUSINESS MEN YOUNG MEN

and women who cannot afford to lose time from work. Send for Free Circular and References Stating the Subject you wish to Study, to The International Correspondence Schools, Box 966, Scranton, Pa.

A. S. Murray and Wife

SPRINGFIELD, MO.

Restored to Health by Dr. Miles' Restorative Nerve.



M. R. MURRAY, engineer for Keet & Rountree Mercantile Co., Springfield, Mo., writes: "I suffered from dyspepsia, was unable to eat anything without severe distress. Treated by several physicians without benefit, I became almost a physical wreck and unable to attend to my work. I took Dr. Miles' Restorative Nerve and in six weeks I was well. My

wife had a severe attack of La Grippe which brought on troubles peculiar to her sex. The Restorative Nerve is the only thing that has helped her. We both hope you will use this in a way to help others as we have been."

Dr. Miles' Remedies are sold by all druggists under a positive guarantee, first bottle benefits or money refunded. Book on Heart and Nerves sent free to all applicants. DR. MILES MEDICAL CO., Elkhart, Ind.



WANTED
Live Deer, Elk, Moose, Buffalo and Bears
The Page fence has revolutionized the whole Park system. We have contracts for so many new parks and game preserves that we shall hardly be able to supply all the animals to stock them. Any one having one or more of above species for sale, please address **PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

The Peerless Fence Co. Agents
The Peerless makes its own tension on both horizontal and cross wires and is the only absolute dead lock wire stay weaving device on the market.
HOLLY, MICH.

PERFECTION SPRING LOCK WIRE FENCE.



FARMERS! If you want the Heaviest, Strongest, get the Perfection Spring Lock, which is made of the best galvanized wire, and has a double cross stay, giving the perpendicular support which all other fences lack.

State, County and Local Agents Wanted. **WITHERTON & CO., Adrian, Mich.**

CYCLONE FENCE CO.
From 27 to 60 inches.
From 7 to 11 cables.
Build Your Fence Cheap.
100 Rods Per Day.
HOLLY, MICH.

CHURCH STEEL SPRING LOCK
Wire Fence and Gates. Have No. 7 Double Steel Pickets. Galv. Steel Lock that locks line wire to picket. Cannot Slip. Write for Free Sample, Circs. and Terms to Agents. **The Church Manfg. Co.,** Box 425, Adrian, Mich.

IRON FENCE POSTS. Cheap, strong and durable. For free description address **CHAS. A. PAUL, Norwalk, Ohio.**

THIS MILL IS DIFFERENT
from all others. Grinds Corn and Cob, Eye, Barley, Oats and Wheat fine; does it all on one set of grind-stones without injuring them. Also make 6 sizes of Belt-power mills from 2 to 25 H.P.
D. N. P. Bowsher, South Bend, Ind.

THE MICHIGAN FARMER,

—AND—
State Journal of Agriculture.

THE LAWRENCE PUBLISHING CO.,

EDITORS AND PROPRIETORS.

M. J. LAWRENCE, - - - President.
M. W. LAWRENCE, - - - Vice-Pres.
L. LAWRENCE, - - - Secretary.

ROBERT GIBBONS, Associate
J. E. BROWN, Editors.

Nos. 11 and 13 Rowland St.,
DETROIT, MICH.

TERMS OF SUBSCRIPTION:

ONE YEAR, Postage paid \$1.00
SIX MONTHS, "60

N. B.—We will always stop sending paper when the time for which it is paid has expired, so that, to avoid missing any numbers, all should renew promptly.

Always send money by draft, postoffice money order, registered letter, or by express. We will not be responsible for money sent in letters. Address all communications to, and make all drafts, checks and postoffice orders payable to the Lawrence Publishing Co.

ADVERTISING RATES:

Regular Ads. per line, each insertion 25c.
Business notices, solid-minion, charged count, 55c.
Regular Reading Notices, set in reading matter type, charged count, 65c.
Special location, 25 per cent extra.
No Ads. inserted for less than 75c per insertion. Cuts and double column Ads. inserted at regular rates for space occupied.
Ads. displayed or leaded to suit advertisers, but are charged per line solid Agate measurement, or \$2.50 per inch each insertion.
No Lottery, Quack Doctor, or Swindling Advertisements inserted at any price.

SCALE OF DISCOUNTS.

The following discounts will be made on orders sent at one time for one advertiser, amounting to \$20 or over, to be completed within one year:

20 and under \$ 50.....	5 per cent.
50 " " 100.....	10 "
100 " " 200.....	15 "
200 " " 300.....	20 "
300 and over.....	25 "

No deviation from above rates.

DETROIT, SATURDAY, MARCH 6, 1897.

This paper is entered at the Detroit Postoffice as second class matter.

MR. CHAS. H. PETERS, acting secretary of the Michigan League for Good Roads, has, under the authority of Acting President Wm. Appleton, issued a call for the annual meeting of the League, to be held at Lansing on Thursday, March 11th, for the election of officers and the transaction of such other business as may properly come before it. The Legislative Committee will also meet at the same time and place.

THE House committee on commerce last week reported a bill prohibiting the transportation of pictures or descriptions of prize fights by mail or interstate commerce. This bill applied to the transmission of reports from one state to another by telegraph, but is not intended to interfere with announcements of the occurrence and result of fights. We have no reason to believe that such a measure will ever become a law, but if it should the days of prize-fighting would be numbered.

ONE of the last acts of President Cleveland was to veto the immigration bill introduced into Congress by Representative Corliss, of this city. The bill had been amended and finally adopted by a large majority in both the Senate and House. The daily journals announce that the Canadians are greatly pleased with the President's veto. It is a misfortune of ex-President Cleveland's that his official acts always commanded the approval of foreigners to a much greater extent than of his fellow-citizens. His motto seems to have been "take care of the foreigners, Americans must take care of themselves."

HON. JOHN DONOVAN, of Bay Co., has introduced a bill into the legislature which proposes to levy a tax upon bachelors, we presume with the idea of lessening the burdens of those who have families to support. The proposed law, while new in this State, is in operation in some countries, and in the Argentine Republic its provisions are very stringent. There the law provides that every male from the age of twenty to thirty shall pay a tax until he marries, and shall pay it once a month. There is also a provision to the effect that young unmarried persons of either sex who shall, without sufficient reason, reject the addresses of those who may aspire to their hands and who continue contumaciously unmarried shall pay 500 piastres for the benefit of the young person, male or female, who has been so refused. We suggest that Mr. Donovan amend his law along these lines, so that it will become more effective, and furnish a solace to those who are suffering from unrequited affection.

THE NATIONAL BUSINESS LEAGUE.

During the sharp struggle between the opposing forces at the late presidential election, a large number of business men throughout the country organized themselves into a league, and took an active part in the contest. A movement has since been inaugurated looking to the permanency of this organization under the name of the National Business League, and extending its sphere of action. Practically, it proposes to take the settlement of such questions as the tariff and currency out of politics, placing them in the hands of special commissions. It is the intention of the National Business League to aid such commissions by collecting, from all possible sources, information regarding the practical workings of existing laws relating to these measures. A recent public utterance of the League regarding the tariff will serve to show the line along which it proposes to work:

"We also take this opportunity to say that the league, being in favor of taking the tariff out of politics, favors the establishment of a new department of the government, to be designated the 'department of commerce and industry,' the scope of which we will not discuss here, and of a tariff bureau in that department, which, after the present revision, shall investigate and report on all contemplated changes in the tariff before action by congress. And we believe that this bureau should be composed of non-partisan experts, of such character and reputation that their report on each schedule or subject investigated by them would be conclusive as to the facts, and influential in the decision. In such cases there will be few occasions for general revisions of the tariff, with accompanying periodical upsetting of the business of the country for months before and afterwards, and the tariff would gradually become a matter of economic science. It is the intention of the league to use its influence in forwarding legislation in this direction."

With the expressed intention of the league to collect information upon such an important subject as the tariff, and to furnish facts secured from those who have practical knowledge of its effect upon their business, we are in entire accord. If the work is done well, and without bias on the part of those engaged in securing such information, only good results can come from their labors. The organization of the business classes into a league for the purpose of aiding in the settlement of certain public questions, we also regard as right and proper. The organization of the farmers into clubs and Granges, and laboring men into unions and federations for the discussion of questions of vital importance to their interests, is of the same nature as the proposed league, and may be regarded as a helpful means of educating the members and making them better citizens, because better prepared to perform the duties of citizenship.

To the proposition to take such questions as the tariff and currency out of politics and place them in the hands of special commissions, we are utterly opposed. Such questions affect every individual citizen, and he must be heard, and also allowed to take part in their settlement. In fact there can be no settlement worthy of the name until a large majority of the voters of the country decide what the policy of the government shall be on such questions. If the people were bound to accept the acts of such a commission as final, there might be some reason to expect permanency in a policy adopted by it. But they are not. There is a court of appeal—the people—which can set aside not only the policy of such commissions, but the commissions themselves. The only thing to be done, therefore, is to educate the people on the questions at issue—not to attempt to settle them upon facts laid before a commission, and outside of the people.

But there is another side to this question to which we wish to call attention: Even were it possible to take such questions out of politics it would be bad policy for a country with a government constituted like the United States to do so. It would simply mean to confine political action to a struggle for the offices and their emoluments, in which case thousands of good citizens in every State, and of all parties, would refuse to take part in the contests, and the government would surely fall into the hands of the most unscrupulous demagogue who would make the largest promises of political preferment. We believe that political parties become purer and stronger in the face of great public emergencies, for then all classes, realizing the danger, see the necessity for united action on the part of the honest and patriotic. The presence of im-

portant and exciting questions in a political campaign, therefore, instead of being deplored should be welcomed, for it means educational development for every individual citizen, and the intelligence and patriotism of the individual is the only reliance for the safety of the government and the maintenance of republican institutions.

It is true many business men in the past have held aloof from politics. Some thought such matters unworthy of notice; others had no time to spare from money-getting. They knew little and cared less how parties were managed, or which one's principles came nearest representing their views. But the late contest opened the eyes of many. They learned that their interests were at stake as much as those who were looking only for profitable positions. Now they hope to avoid trouble in future by taking such questions out of politics and placing them in what they believe to be safe hands. They want the right to go on and make money in peace, without the necessity of paying any attention to public affairs. Their position would be all right under a despotic form of government, but not in a republic. In a republic every individual practically pledges himself to take part in the government, to aid it by his assistance and counsel, for each and all are equally interested in its maintenance. Citizenship in a republic, therefore, while conferring certain privileges, exacts the fulfillment of certain duties in return. To neglect those duties is very reprehensible on the part of a citizen, and he need not expect to escape the responsibility by delegating such duties to a commission. His only safety, and the safety of the government also, must come from his taking part in public affairs, and faithfully discharging his duty as a citizen.

Another point we do not like in the expressed sentiments of the league, is the implied distrust of the people. The members seem to fear the people do not know enough to vote intelligently upon great questions of public policy. Well, we have seen the business man and the capitalist, in times of great national peril, favoring compromises and makeshifts which would put off for a time the day of settlement, while those whom Lincoln called "the plain people," went to the ballot-box and voted to settle the question at once, and forever. We have never lost faith in the intelligence and patriotism of the masses of the American people since, and we believe them entirely capable of performing any duty devolving upon them as citizens of the Republic.

SPECIFIC AND AD VALOREM DUTIES.

The Chicago *Drovers' Journal*, referring to the proposed new schedule of duties on foreign live stock, which has been under consideration at Washington, says:

"The ways and means committee now in session in Washington have under advisement the question as to whether they shall change the present ad valorem duties on cattle to specific duties, and as this change is likely to work a great injustice and at the same time to bring a great favoritism to the opposite ends of the country, it seems that there is no just duty that could be imposed outside the ad valorem. If cattle were more uniform in weight and quality the old specific duty of so much per head would have some measure of fairness, provided that all of them were equal, for instance, to the best that cross the line from Canada, but it would be manifestly unjust to all concerned to have thin feeding cattle pay as much duty per head as matured cattle that had been fed on grain and cared for by the labor and capital of another country."

We think the *Journal's* reasoning is erroneous, judging from the practical working of an ad valorem system of duties rather than a theoretical one. Specific duties cannot be evaded by falsehoods or sharp practice, while the results of an ad valorem system, one that levies duties in accordance with the appraised value of the goods, is a fruitful cause of fraud, false swearing and endless litigation. It is also certain that ad valorem duties are never collected on the true value of imported goods, and that the smoothest liar and most unblushing fraud always profits at the expense of the government and his honest competitors. The system favors bribery and corruption, and has been a fruitful cause for scandal in the public service.

The safest and most equitable method of levying duties upon articles where there is a great variation in values, is a specific duty upon each article, and then an ad valorem duty upon its appraised value. In the case of live stock this would be entirely equitable. Thus, for instance, let there be

a specific duty of \$2 levied upon each head of cattle imported, and, in addition, five per cent ad valorem. A steer of 1,000 pounds, worth in the Buffalo market five cents per pound, would then pay \$2 specific duty and \$2.50 ad valorem, a total of \$4.50. If the steer was only of fair quality, worth \$3.50 per hundred, the duty would be \$2 specific and \$1.75 ad valorem, a total of \$3.75. While a part of the ad valorem duty would be evaded by some of the importers, that specific duty would always be collected; the government would then be surer of its revenues, and the American cattle-grower of being protected in his home markets.

THE PRICE OF BEANS.

I notice that beans are quoted in the FARMER, in the New York market, at an advance of 25 cents or more per bushel, over the Detroit market. Can you tell me the cause of so great a difference between the two markets. Why are pea beans worth less than other varieties? Is it because they are inferior in quality or is there an over-supply of that variety? Can you direct me to a reliable commission house in New York? What is the prospect for holding beans? You may answer through the FARMER. R. H. OSBORN.

JACKSON CO.
The price of beans in the New York market, as quoted in the FARMER, represents the choicest quality only. There are two grades of clean beans quoted, choice and fair. The following quotations will show the difference in the value of the grades: Domestic marrow, choice, \$1.15; fair to good, 90c@1.10; medium, choice, 90c@95c; fair to good, 75c@85c. There are not many beans shipped from this State which will grade choice, as they have to be perfect in every respect.

Pea beans have been in large supply all season, and have ruled lower than other grades in consequence.

We could not direct you to a reliable commission house in New York. There are undoubtedly many; but we would want to know them well before endorsing them as reliable.

As to holding beans, the question is an open one. Whether it will pay or not depends upon two contingencies: Will as large an area be planted the coming season as last? Will the season be as favorable, and the production as large as last year? Who can answer those questions? No living man. If everyone grew the same crops from year to year, there would be some chance of arriving at a conclusion as to the future. But when they change from year to year so as to secure the big prices that prevailed for a certain crop the previous season, it is impossible to even guess at the outcome. The safest way is to put the same area in a crop each year, and you will hit the market on some one. Running into a specialty is always dangerous, as others are sure to be doing the same thing, and the crop becomes unprofitable.

HOG CHOLERA.

O. A. W., of Wheatland, Mich., sends the following inquiry:

"Is there an act on our statute books relative to hog cholera in Michigan? If so, where?"

There is no special statute regarding hog cholera; but the disease comes under the statute providing for the appointment of a State Live Stock Sanitary Commission, and defining their duties. (See Howell's Annotated Statutes, Chap. 61, section 2136). That statute prescribes the duties of those owning or having knowledge of live stock suffering from any contagious or infectious disease. It provides that owner must notify the commission of such ownership, and must secure the affected animal or animals in such a manner as to prevent their coming in contact with healthy animals and thus spreading the disease. Upon the arrival of the commissioners, they take charge of the diseased animal, and either quarantine or destroy it as thought best. There is a fine provided for in case the owner neglects to inform the commission or to take means to prevent the spread of the disease.

CHAS. A. KERR, Springville, Mich.: We do not know address asked for, and cannot find any record of such a patent.

F. G., Aurelius, and V. C., Dowagiac: There are several herds of Galloway cattle in Michigan. All the owners, we believe, have stock for sale. If they have they should announce the fact through our advertising columns.

Hood's Sarsaparilla is known to be an honest medicine, and it actually cures when all others fail. Take it now.

For the Michigan Farmer.

OPPOSES THE REPEAL OF THE LAW.

I see by the FARMER and other Michigan journals that a strong effort is again to be put forth in the Michigan legislature, at its present session, to release the holders of mortgages in Michigan from taxation. What can be the object I cannot imagine. No class of people are more able to meet the demands of taxation than loaning corporations and individuals holding mortgage loans all over the State. There is probably not a township in southern Michigan but what has mortgages of thousands of dollars assessed. Notes and mortgages (usually notes accompany mortgages) are taxed in nearly all the States, the same as other personal property. And why should they not be here? If a man has a thousand dollars in money it is taxed the same as other personal property. If with it he buys or takes a mortgage, his mortgage is taxed instead of the money, and why should it not be? He is worth no more nor less than when he had the money. He has merely changed his property from money to mortgage. Should the mortgage be released from taxation the balance of the taxpayers would have to make up the difference, which would be a very considerable amount. The last legislature acted on this question, but the money power was not strong enough to carry it, and it is hoped it will not be now. It certainly could benefit none but that class. It is true that notes and mortgages are not always found, but when they are they should be taxed.

The mortgagor usually pays the tax on the whole real estate covered by mortgage. I think it is a very rare thing that he pays a tax on the mortgage besides. It is no more common to do so than it is to pay the taxes on the notes that he owes. Such circumstances are certainly rare. The only recommendation I would suggest is that the real estate be assessed at its real value, less the amount of indebtedness for it. If I had a thousand dollars on which I am taxed, and bought with it a two-thousand-dollar farm, running in debt for it a thousand dollars secured by note or mortgage, why should I pay any more taxes than I have been paying? I am worth no more than I was before I bought it. Certainly something of that kind might help the struggling farmer. The trouble with the tax law six or eight years ago was that it made the tax on the mortgage a lien on the land, to be collected where the land was located, consequently it largely released the mortgage holder from paying taxes. The design probably was to favor the mortgagor, but the result was to favor the mortgagee to the detriment of the mortgagor, the same effect that the release of taxes on mortgages would now have. I was surprised that Governor Pingree should favor such a measure. I think it would not require a very wise prophet to predict its early death, such as the other tax law met, if it should pass.

JACKSON CO. NATHAN SHOTWELL.

A CORRESPONDENT asks if we know of any spring wheat being grown successfully as far south as Jackson County. We have not heard of any in 25 years; but there may have been some tests made by Jackson County farmers. If so, we would be pleased to get a statement of their experience.

We acknowledge the receipt of the third volume of the Register of the Michigan Merino Sheep-Breeders' Association, through the courtesy of Secretary E. N. Ball. The volume is a credit to the Association. It contains 524 pages, is well printed on good paper, and bound in morocco. This brings the record of Michigan flocks up to the close of 1895, and is a necessity to every breeder of American Merinos.

NEWS SUMMARY.
Michigan.

Pontiac now has five large carriage factories and it is estimated they turn out 20,000 vehicles yearly.

The A. P. Booth Packing Co.'s plant at Petoskey burned to the ground last Friday. Loss on buildings and contents, \$15,000.

The Hibbard opera house at Jackson was destroyed by fire last Saturday night. The building cost \$30,000 fifteen years ago. It was insured for \$10,000.

Prof. A. J. Swain, superintendent of schools at Buchanan for the past eight years, died last Sunday of typhoid pneumonia at the age of 61.

It is reported that Wyandotte is soon to have a factory for the manufacture of caustic soda. The contract for a steel building 300x400 feet has been let and it is hoped to have it ready by June. The factory will employ about 100 men.

There will probably be no county fair held at Coldwater this coming season. The association is said to be burdened with a debt of \$3,600, and as it finds itself unable to pay its premiums the farmers who usually make exhibits are rapidly losing interest.

Gov. Pingree some months ago offered a prize of \$25 for the law student at the University who would bring to light the greatest number of obsolete laws now on the

Michigan statute books. The prize has been awarded to T. L. Jacobs, that gentleman having found more than one hundred such laws.

It is said that an effort is now being made to form a stock company at South Haven with \$50,000 capital for the purpose of running a passenger and fruit boat between South Haven and Chicago the coming season. If the scheme materializes it will provide fruit-growers of that region quick and reliable transportation to a good market.

The Benton Harbor & Eastern Transit Railway Co., has closed contracts for the Courtwright factory that has been idle for three years, and will convert it into a mammoth electric power house to furnish power for their road that is to extend to Cassopolis from Lake Michigan through a tunnel under Benton Harbor. They expect to set 300 men at work within sixty days building tunnel and tracks.

Warrants were issued last week for the arrest of D. F. Comstock, C. W. Comstock and C. W. Cunningham, late president, manager and cashier, respectively, of the defunct Mecosta County Savings bank at Big Rapids. The manager and cashier were arraigned before a justice who fixed their bail at \$2,500 each, which was furnished. The president was not arrested on account of sickness. The complaint charges violation of the banking laws, stating that about a month before the bank closed the president, manager and cashier executed false and worthless paper to the amount of \$9,000 running to the D. F. Comstock Lumber company, which is composed of the above named parties.

General.

Senator John Sherman sent his resignation to Gov. Bushnell last Wednesday, and the Ohio governor immediately appointed Mr. Hanna to serve the unexpired term.

Luther Henry Tucker, editor and proprietor of the *Country Gentleman*, died at his home in Albany, N. Y., Feb. 23. He was 62 years of age, and had edited that popular journal since 1873.

The circuit court grand jury at Louisville, Ky., has returned indictments against the officials of the defunct German National bank, charging them with conspiracy to defraud the public.

Ex-President Jorge Montt, of Chili, is now in this country and will remain several months. He comes as vice-admiral of Chili for the purpose of studying the United States navy with a view to obtaining ideas for the improvement of the navy of his native country.

Disastrous fires the past week have occurred as follows: Fort Wayne, Ind., hardware store and adjoining buildings; loss, \$150,000; Middlebranch, O., Portland and Diamond Cement Co.'s plant; loss \$200,000; Alexandria, Ind., American Plate Glass works; loss, \$40,000.

During the high water at Cincinnati last week, a five-story stone warehouse was so damaged that it collapsed. Of the eleven men in the building at the time all escaped but one, who was crushed to death. About 1,000 barrels of sugar, valued at \$12,000, were destroyed. The building is a wreck and was valued at \$40,000.

President McKinley was duly inaugurated at Washington on Thursday. Several cabinet appointments were not definitely decided upon until Wednesday. The cabinet complete as finally announced is as follows: Secretary of State, John Sherman, of Ohio; Secretary of the Treasury, Lyman J. Gage, of Illinois; Secretary of War, Russell A. Alger, of Michigan; Attorney General, Joseph McKenna, of California; Postmaster General, James A. Gary, of Maryland; Secretary of the Navy, John D. Long, of Massachusetts; Secretary of the Interior, Cornelius N. Bliss, of New York; Secretary of Agriculture, James Wilson, of Iowa.

The committee appointed to select a design for a monument to be erected over the remains of Francis S. Key, the author of the famous anthem "The Star Spangled Banner," has made a selection with the understanding that the monument is to be completed in time for unveiling June 14, 1898. The site selected is an elevated plat facing the main entrance to Mount Olivet cemetery, Frederick, Md. The bodies of Key and his wife will rest beneath the shaft. Five thousand dollars were appropriated for the monument fund by the Maryland legislature and the remaining sum needed was collected by the monument association from persons in all parts of the country, many penny and nickel contributions being sent by school children.

ANY of our readers wanting a Land Roller or Pulverizer should write Lehr Ag'l Co., Fremont, Ohio. See ad.

5 DROPS—The marvelous curative remedy advertised by the Swanson Rheumatic Cure Co., of Chicago, in this issue, is doing a great and good work among the sick and afflicted everywhere. It is a wonderful remedy and is meeting with a wonderful success.

SMOKING MEAT WITHOUT FIRE.—It is a well known saying that "where there is smoke there must be fire." Science, however, has made this idea obsolete, and to-day with Krauser's Liquid Extract of Smoke it is possible to quickly, economically and successfully smoke meat without a fire. This liquid extract is made by distilling the smoke from hickory wood and is absolutely harmless. By writing E. Krauser & Bro., Milton, Pa., those interested can secure free instructive matter about curing and smoking all kinds of meats.

\$100 IN GOLD GIVEN AWAY

Are you a smart spell-er? We give \$100 away in prizes to those able to make the largest list of words from the word RESPONSIBLE. You can make at least twenty, we believe, and if you care you will get a present any way, and if your list is the largest you will get \$40.00 in cash. Here are the rules to follow: Use only words in the English language. Do not use any letters in a word more times than it appears in RESPONSIBLE. Words spelled alike can be used only once. Use any dictionary, and we allow to be counted proper nouns, pronouns, prefixes, suffixes, any legitimate word. This is the way: Responsible, response, rip, sop, see, sin, sip, soil, sob, sole, etc. Use these words. The publisher of THE AMERICAN WOMAN will give away, on April 10, the sum of \$100, divided into 24 prizes for the largest lists of words as above. \$40 to the person making the largest list; \$10 for the second largest; \$5 each for the next five largest lists; \$3 each for the four next largest, and \$1 for each of the next 12 largest lists. We want you to know our paper, and it is for this reason we offer these premiums. We make no extra charge for the privilege of entering this word-building contest, but it is necessary to send us 25 cents silver or stamps, for which we will send you our handsome illustrated 28 page magazine for six months, and the very day we receive your remittance, we will mail you free, a beautiful picture, entitled "The Forest Sanctuary," 17x24 inches a charming present. This offer is the greatest you have ever had made to you. Send your list at once. If you win one of the prizes your name will be published in our May issue. Address THE AMERICAN WOMAN, 119 and 121 Nassau St., New York City, N. Y.

RUMELY

THE RUMELY Simple and Compound Traction and Portable Engines are Good Engines. The Portable Engines are 8 to 15 h. p. and the Traction Engines are from 8 to 20 h. p. These engines possess the largest possible traction power, easy steaming qualities, simplicity, strength and

ENGINES

durability. Boilers made of best steel boiler plate of 60,000 lbs. tensile strength. The six sides of the fire box are surrounded by water. They are built to meet the requirements of the trade and they do it. More about them in our free catalogue. M. RUMELY CO., LA PORTE, IND.

REAR GEAR

Every Farmer Should Have One

LOW PRICE FOR FIRST MACHINE SOLD IN UNOCCUPIED Territory

DOES THE WORK THAT GANGS OF HARROWERS WILL TWICE

AGENTS WANTED

SEND FOR CIRCULAR & TESTIMONIALS TO The Cutaway Harrow Co. HIGGANS, CONN.

SOLE MANUFACTURERS

EARL D. BABST,
56 Moffat Building, - Detroit, Mich.
Attorney-at-Law
Practice in all courts; Collections made anywhere in U. S.; special attention to law of the farm. Attorney for Lawrence Pub. Co., also other references.

The Sheep Earns his Living.
Saves Man's Labor.
An Economical Convenience.

Other dairymen use a dog, a goat, or a calf, the one most convenient. Very many

Improved U. S. Separators

are being operated in this manner. The owner of the outfit here shown, writes:

I am using a No. 5 Improved United States Cream Separator, and running it with one of your Sheep Powers. I use in the Power a sheep weighing 170 pounds, and it runs very nicely indeed. The sheep took to the work quickly, so that we can leave him to run the Power while we are milking or doing other chores. I am separating 450 to 500 pounds of milk per day in this way, and consider it the most convenient Power out.

I find a saving of \$15.00 to \$25.00 per month on my milk in thoroughness of skimming over any other method. A. A. DUNKLEE, South Vernon, Vt., March 7, 1896.

We sell the best Separator, adapted for hand operation or readily changed to be run by any power.

We sell a thoroughly practical Sheep or Dog Power.

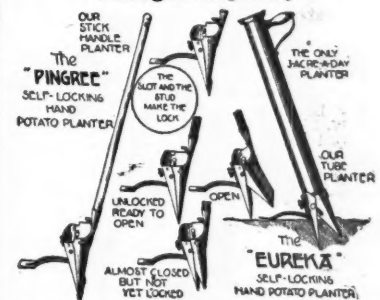
OUR CATALOGUES DESCRIBE FULLY. THEY ARE FREE.

LIVE, HUSTLING AGENTS WANTED.

VERMONT FARM MACHINE CO., Bellows Falls, Vermont.

LEAN'S ALL STEEL HARROW OUGHT TO LAST A LIFE TIME.

UNEQUALLED for all kinds of farm work. Saves its cost first season on growing crops. All steel, no castings to break—strongest and simplest lever adjusting arrangement made. Write for descriptive circular. Address RODERICK LEAN MFG. CO., ZANESVILLE, OHIO.

SELF-LOCKING HAND POTATO PLANTERS.
Plant 3 Acres per day.

Work better and three times faster than the hoe. "EUREKA," \$1.25; "PINGREE," \$1.00. Greenville Planter Co., Greenville, Mich.

Rife Hydraulic Engine

Water supplied automatically for residences, stock farms, creameries, irrigation. Water elevated 30 feet for each foot of fall with a fall of 2 or more feet. Pure water delivered, using impure as power. RIFE ENGINE CO., 126 Liberty St., NEW YORK.

BUGGIES, Carts, Burrens, Planets, Spring Wagons, Harness and Saddles shipped C. O. D. anywhere to anyone with privilege to examine at lowest wholesale prices. Guaranteed as represented or money refunded. Send for illustrated catalog and testimonials free. Address fully CASH BUYERS' UNION, 165 W. Van Buren St., 5-311 CHICAGO.

BARLEY, "OHIO BEARLESS."

Six rowed, beardless and hull remains tight. Early to ripen. Yields more bushels per acre than oats and brings the farmer twice the money. Try it. \$1.00 per bushel. Bags 15c each. Write for circular, catalogue and prices on Clover, Timothy, Red Top Blue Grass, Orchard Grass and Field Seeds. THE HENRY PHILLIPS SEED & IMPLEMENT CO., 115 117, St. Clair St., Toledo, Ohio.

Thoroughly Fire-Dried Pedigreed Seed Corn.

Brown's Medium Early Yellow Dent. This variety cannot be excelled anywhere. Grown on this farm from pure, selected seed, continually for over 30 years. Many thousands of bushels now grown annually from our own seed. We take extra pains to preserve purity, and guarantee perfect germination of seed. Price per bushel, re-assorted and cleaned (new bags), \$1. Address J. H. BROWN, Climax, Mich.

5 Best Seed Potatoes \$1.50 per bbl.

Carman No. 1, Carman No. 3, Rutland Rose, Banner, Quick Crop and 20 other new varieties, all true to name. All bbls. 3 bu. Early Siberian Oats 55c per bu. In bags. Send for sample of oats. E. G. SEXTON, Springfield, Mich.

FREE 10 pkts. of FLOWER SEED, or 10 pkts. of VEGETABLE SEED.

Your choice with our catalogue of Fruits, Flowers, Potatoes, Bulbs and Seeds of all kinds, with this ad. and 10c. to pay postage. This will not appear again. Cut out for future use. Catalogue free to agents. GOULD NURSERY, Beaver Dam, Wis.

FREE A booklet, handsomely illustrated, describing Nebraska, her farms and the opportunities there for young men and farm renters to become farm owners. Mailed without charge on application to P. S. EUSTIS, General Passenger Agent, C., B. & Q. R. R., Chicago, Ill.

RUPTURE Can be Cured

Send for 100 pp. illus. book and learn how. SERLEY'S TRUSS ESTAB., 25 S. 11th St., Phila. Pa.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD,
FLINT, MICH.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. This invitation is general, and we hope to see it accepted by many. Address all letters for THE HOUSEHOLD to Mrs. Ella E. Rockwood, Flint, Mich.

LIFE.

A little child, with glowing cheek
And beaming azure eye,
Chases in her childish joy,
A bright-winged butterfly.
She stops and draws a perfumed breath,
And, with a fluttering sigh,
A little heart sends up a prayer,
"Oh, God! don't let me die!"

The maiden in her bridal robes
Stands by her lover's side,
And feels that not in all the world
Is found a happier bride.
Her joy complete, "Oh, God!" she cries,
"What hast Thou more to give?
My cup is full, my heart o'erflows;
"Ah, it is sweet to live!"

A necklace made of dimpled arms,
Two ruby lips to kiss,
Two smiling eyes look into hers
In ecstasy of bliss.
The mother presses to her breast
The child she had to give,
And murmurs through her grateful tears,
"Ah, now I live! I live!"

The years roll past, and on her brow
There rests a silver crown;
She finds a deeper, calmer bliss
Than when she wore the brown.
Her children's children round her make
The air with laughter rife.
She takes her husband's hand in hers
And whispers, "This is life!"

Tread softly; let the spirit leave
Its dust in silent peace;
The Sable Reaper, with his blade,
Has said her life shall cease.
The spirit, as it takes its flight,
Does this sweet message give:
The pale lips murmur, soft and low,
"Lord Jesus, now I live!"

—Housekeeper.

HOME CHATS WITH FARMERS' WIVES.

THE SEASON'S FUEL.

March is the last month for getting up the wood for the coming year. The provident householder has this already prepared. He takes time by the forelock and gets a big pile of fuel ready early in the winter. But there are always those who are rather tardy about it, and these will, I hope, regard this as a gentle reminder of their duty to their better halves and not allow the month to pass and spring work to begin without ample provision in this direction.

If there is anything which is exasperating to the cook, it is a scanty supply of fuel. And what is about as bad is having only green wood to burn, even though this is in abundance.

A man would need but one day's experience as presiding genius of the kitchen with green wood his only resource as a heating agent, to convince him that as a temper-tryer it cannot be beat, yet many women have to get along with it year in, year out. The amount of energy expended in the continual poking to make it burn might be better employed.

Less than a mile from our home I saw a woman chopping wood from a log at the door the other day. Did this speak well for her husband in the estimation of the passer-by? He is numbered among those who were born with that tired feeling which is such an affliction in the estimation of other people, yet which rarely troubles the victims themselves.

Now, it takes no more work to prepare the season's wood all ready for use during the winter months than it does to get it up a log at a time. In fact, it saves time to do so, as then there is no delay when everybody is busy and the field work pressing. It puts a man all out of sorts for the whole day to have to stop work and get up a load of wood—and it puts a woman all out of sorts to be obliged to ask him to do so.

How many farmers' wives the world over depend wholly upon a very precarious supply of wood from day to day? I do not wonder at all that some of them have become desperate and gone out on a strike, setting the potatoes in the sun to boil, or putting them into cold water upon a cold stove and calmly awaiting the wrath which was sure to descend upon their heads when the noon hour approached and dinner not ready. It is related of these brave women that the lesson was effectual, that their liege lords took the hint and thereafter kept a good supply of fuel at hand.

The Household editor has felt pleased when, from time to time, the men who take the FARMER have signified their interest in this department. There are many belong-

ing to the male sex who read these columns. If there should be one among the number who in times past has been in the habit of drawing a log from the woods to the back door from which to cut the fuel an armful at a time, I want to ask a favor of him. For the sake of the woman whom you love and who loves you, the mother of your children, the one whose faithfully performs the many and varied duties which fall to the lot of the farmer's wife; for the sake of the girl you once courted and from whose lips the slightest wish was your law; in remembrance of those days, which, when you stop to think of them, even now bring a thrill to your heart, out on your hat and wamus, go to the woods with your axe and make a beginning on the fuel supply for the year. Tomorrow keep at the job and thereafter every day until there is ample provision for the whole year.

Then when it is all prepared, split and piled, the sticks neither too long nor too short, the "chunks" for the sitting room stove by themselves, you will experience a feeling akin to true happiness, the consciousness of a duty done, a kindness extended to one who truly deserves and who will as truly appreciate it.

It is the little things of life which are wearing. The little annoyances are hardest to bear with equanimity. Has not the woman who hushes the crying child so that its father may not be disturbed, who leaves her work to find the missing article which he wants, who is never too busy to sew on the button or to do the thousand and one little services which the loving wife is called to perform upon every day of her life, a right to like consideration? Yet how often it is that the doorstep needs fixing, a broken latch to be repaired, a new valve put in the pump or something done whereby she would be saved many extra steps or unnecessary labor every day. But she "gets along" uncomplainingly, waiting for the time to come when they can be done as well as not.

It is easy to say what we would do in another's position, but I think any woman would be justified in taking extreme measures if she is not properly supplied with good, dry wood, for the kitchen stove at least.

TO THE HOUSEHOLD.

Someone asks why more of our farmers' wives do not write to the Household. With the editor's permission I will try and give a few reasons why at least one of the above named persons has never done so.

First, among such good letters as we have in the Household mine would hardly be worth printing. Next, there are so many things to take the time when one is kitchen-maid, cook, laundress, and seamstress all in one. There is scarcely time to answer letters from relatives and old schoolmates.

A long time ago I read some directions for writers to follow and they were deeply impressed upon my mind; one was to take a subject and stick to it. How can we farmers' wives stick to one subject when our minds are full, pressed down, and running over with so many things, from making Johnny a suit out of next to nothing which will look as nice as store clothes, down to making one pie do for twelve people, part of them visitors who came unexpectedly just at meal time. If I ever try to keep my mind on just one thing for five minutes at a time husband is sure to rush in and want a button sewed on in three minutes less than no time. By the time that is done and the saw set or some article found for him, baby wakes, the fire is down, and the subject must be left till next time.

But I can and will write on one side of the paper only, and if my letter does get into the waste basket it will not be as disappointing as the last bean crop.

These winter days are so short! We get up late, there are heads to comb, dinners to put up, an example to explain or a lesson to hear, and if the rooms are tidied and dusted ready for possible company by ten o'clock we have got along well with little enough time left for baking, with dinner at noon, for the men folks must have their dinner if they didn't get their breakfast till eight o'clock, and my conscience will not admit of a cold supper for the children.

The sewing is always crowding unless one can afford to hire, and there are many like myself who cannot do that. Should this find its way into the Household I will try and give some more reasons why the average farmer's wife doesn't write to the Household.

MRS. GRACE.

USEFUL AND ORNAMENTAL.

Fig. 1 is a bib for a child. The model is of white marseilles or pique, embroidered in simple scallop of buttonhole stitch. Can be made of plain white goods, in which case it should be quilted in diamonds with layer of sheet wadding between lining and out-

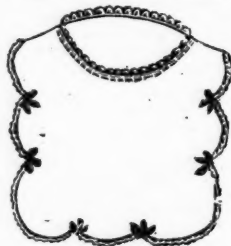


FIG. 1.

side. Finish at neck with narrow lace frill or ruffle, which can be used as a finish for edge of bib instead of scallop if preferred.

Fig. 2 is a sprig of embroidery suitable for edge of baby's blanket or skirt, to be done in silk.

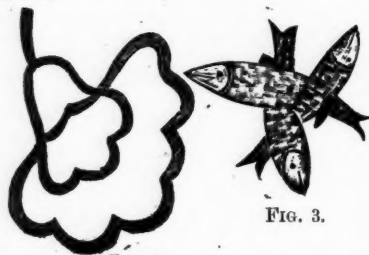


FIG. 2.

Fig. 3 shows a design for a corner of napkins, to be done in colored embroidery.

Fig. 4 is a daisy tidy pattern, to be made of white muslin; scraps can be utilized for the purpose. Mark the circles with a pencil, using a tumbler or goblet as guide; cut out, turn the edges in, and gather neatly; draw up and fasten securely; fill each opening with yellow worsted stitches fastened across from side to side; clip in the middle of the cross stitches; pick out with a needle so as to form a fluffy center or heart of each daisy. Join each daisy as shown in illustration, and finish with white cord and tassels. This makes a very handsome tidy; can be made at odd moments, and is handy as pick-up work. The centers can be filled in with crimson wools if preferred.

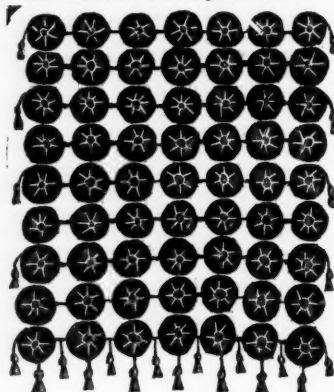


FIG. 4.

Fig. 5 shows a penwiper, of fan shape; foundation of cardboard covered with cloth embroidered in any simple design, or velvet may be used. Fill inside with several leaves pinked at the outer edge; finish with cord and tassel, or a simple bow of bright ribbon may be used instead.

DORIS.

A FRESH AIR ARTICLE.

I have read the articles of the Household for several years but have never written, but if our editor will allow me space, will add my mite.

Beth Crane voices my sentiments in her care of beds and rooms throughout the house. More care in regard to proper ventilation, methinks, would many times save sickness in the family, especially

where there are small children, and this year, with the large amount of apples and vegetables put into the cellars, see that the decayed ones are carried out and not left to send their impurities through the rooms above. Let the doors and windows of each room of the house be opened if only for a few moments and let God's pure air come in. He meant it for us to breathe and it will not injure us if care is used in admitting it.

So many mothers are afraid to let their little ones go out to play in the winter. They make a great mistake in shutting them up in close rooms. Bundle them up and let them go out and play in the sun and you will see them come in with rosy cheeks and bright eyes. I am the mother of three healthy children and feel that in a measure it is owing to fresh air and proper food. I have written quite a lengthy article, and if I am not considered a crank will perhaps come again.

FLINT.

A. H. E.

[The editor welcomes just such cranks as A. H. E. to our Household. Let one and all of our readers feel at perfect liberty to write their sentiments. Remember these are your columns, not mine.]

THE UNCOMMONNESS OF COMMON THINGS.

The farmer's wife exasperates me sometimes. I know her worth, know that without her nine-tenths of our fair land would be a howling wilderness. But she will go on doing the same thing in the same way three hundred and sixty-five days in the year.

No, I don't mean you. You read the household departments of the agricultural papers. This help, added to your original originality, absolves you from the above charge. I mean your neighbor, the other farmer's wife. Why, I know families where I could tell what their breakfast will be every morning for the next month, and the only mistake I could possibly make would be, they might have, for three mornings, doughnuts in the place of cookies.

Don't let us do it. These common articles of food of which God gives us an abundance can be prepared in so many appetizing ways.

Now, there are potatoes, for instance. That neighbor of yours always has boiled

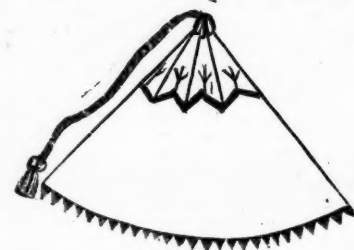


FIG. 5.

potatoes, and when she has company or occasionally on Sunday she mashes them. Why not bake them, slice them, slice them thin and fry in the pan with a little butter or droppings, or pare them and bake in the dish in which you are roasting your beef or pork.

Do you ever have creamed potatoes? Chop them in pieces about the size of dice, put in a basin in layers, sprinkling flour, salt, and bits of butter between the layers; cover with milk and bake slowly until done. Especially nice for supper where the children carry their dinners to school. Of the different ways of "warming over" potatoes there is no end. See to it that your family is not served with them prepared in the same way for twenty mornings in succession.

Now, there are the bins of apples, sweet and sour, in the cellar. Your neighbor makes pies of them and once in a fortnight has apple sauce. You can have baked or boiled sweet ones and sour ones cut in halves, cores extracted, and sprinkled with sugar and small pieces of butter before baking. Fried apples make an excellent breakfast dish. Hot stewed apples or baked apple sauce should always accompany roast pork. Apple dumplings are an American institution. There are many delicious puddings to be made from this fruit, whether you call them "cobbles," "bird's nests," or, as my round-faced German friend does, "apple grunts."

Does oatmeal always form your first course for breakfast? Why not have, part of the time, some of the wheat preparations, graham mush, or grits? The health of your family would not be impaired should another dish occasionally take the place of the cereal. Toast, graham or whole wheat gems, or even griddle cakes. Yes, I know these last are considered unwholesome, but look at our present generation of farmers. They were "raised" on griddle cakes, and where can you find their equals?

Whatever you do, sometimes do something else.

HOPE DARING.

[Does our correspondent mean to imply that farmers' families are the only ones where she can tell to a certainty just what the morning bill of fare will be? Does this not apply equally to others? Are there not families not living on farms where the morning meal consists of oatmeal, coffee and doughnuts, or toast, 365 days in the year?—ED.]

With approach of spring take Hood's Sarsaparilla to purify your blood. It will make you strong.

Enameline

The Modern STOVE POLISH.

Produces a JET BLACK enamel gloss. Dustless, Odorless, Labor Saving. 5 and 10 cent boxes. Try it on your Cycle Chain.

J. L. PRESCOTT & CO., NEW YORK.

THE DIFFERENCE.

A dear little boy who was hard at play,
Sat down on the ice one day,
Sat down on the ice in a sudden way.
His hands flew up, and his feet flew out,
And he felt very sad, I haven't a doubt;
But he swallowed hard, and he winked quite fast,
And never a tear did he shed, not he.
For he was a boy, with a big, big B,
For he was a boy you see.

Then a dear little girl went down kee-thump!
And up came the ground with a funny jump
And gave her forehead a wee little bump.
Then, oh, the wailing that filled the air!
And auntie and mamma were hurrying there;
And as many as six big tears came out
To find what the noise was all about!
For she was a girl, with a small, small g,
For she was a girl you see!

—Youth's Companion.

THE INFLUENCE OF A FARMER'S HOME.

During these long winter evenings, or stormy days, the farmer or his sons may be at a loss to know what to do with their unoccupied time; and matters are not bettered any when they live where it is convenient to drop in at the corner grocery.

Aside from the indolent and shiftless habits that boys are liable to contract by spending their time in such a manner, the conversation often indulged in, the vile and coarse stories rehearsed, are not calculated to build up a noble manhood, but on the contrary, blunt and destroy the true and finer elements of one's nature.

Character is determined to a great extent by its environments. We eventually become, in a measure at least, like those with whom we associate. As the poet says:

"Vice is a monster of so frightful mien,
As to be hated needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace."

Lewd conversation lowers the moral standard, creates an abnormal appetite and eventually breeds licentious habits. Show me the company which a boy keeps, and tell me how he spends his leisure time, and I will tell you about what sort of a man he will make. How often the husband and father starts for the "corners" just as soon as the chores are done, followed by the boys! Who is to blame? Perhaps it is the wife and mother, but more often we think the men are as much or more to blame than the women.

In making a home attractive there should be co-operation on the part of the parents; otherwise there is likely to be some uphill work. How many parents try to create within their boys a preference for home over all other places of amusement? Music, books, games, are all helpful. Perhaps the most efficient way is to set them a good example. The parents who interest themselves in books and music and have some object in life other than making money, usually have very little trouble in keeping children at home.

Furnish the children with amusements, etc., get the boys a scroll saw or a set of carpenter tools, provide a workshop, and ten chances to one they will have no desire to go away from home to spend their evenings or stormy days. Can't afford the expense? Nonsense! Prevention is a good deal cheaper than cure. Musical instruments, books, tools, etc., will not cost you as much, even in dollars and cents, as it will to let your boys sow their wild oats. Is money to be compared to manhood, good habits or the satisfaction of bringing up a family to be proud of? Many young men spend enough money in cigars, tobacco, attending dances, or in ways far worse, to furnish all these luxuries, as some might term them, and put money in the bank besides.

Keep the children occupied. Get them interested in something. If possible, let them have something of their own, the money they get from that source to be their own, to use as they think best. This will also teach them business methods, thus making them far more competent to fight life's battles when the time comes for them to shift for themselves.

VIRTUE AND PURITY.

WHICH SHALL IT BE?

Shall we live with our children or for them? We know of many parents who do the latter, especially the mother, who works, plans and contrives every way to advance the material interest of her children, but rarely do we find the former, where the parents are comrades as well as guide and mentor.

A celebrated historian says, "If any one class of men more than another has risen to eminence, it has been the sons of widows." Is it not likely that the mother left alone, will, more than others, make companions of her children? The thought seems worthy of consideration and we leave it with you to be thought out at leisure.

Besides taking an active interest in the routine work of a child's daily life we may have many readings together from first-class books and magazines for children. Let me tell you of a game that has whiled away many an hour pleasantly as the children gathered around the kitchen fire while we did our evening work. We called it playing "Guess." One of the party thinks of an object and gives the first letter of its name. For instance, one thinks of a ship and says, "I have thought of something and it begins with S." The rest then question him and he must answer as best he can unless the question comes too close and he declares it would be "telling." They may ask, "What color is it?" Is it something made, or does it grow? Has it legs? Does it move

about or is it stationary? Is it vegetable, animal or mineral? Have we one? Of course some will be easily guessed and others will tax the ingenuity of the best guessers. The best thing given us to guess was a light-house. In a compound word the first letter of each word was given.

Dear mothers, with the little ones trooping around you, let us make the evenings as pleasant as possible, something to look back on with pleasure in after years. What seems a little thing to us may give keen delight to a child. Let us make the children warm and comfortable, but let it be done as easily as possible, for of all the gifts we may or may not be able to give our children, there can be nothing of so great value as to give ourselves, our very best selves.

E. C.

EVENING WORK.

These long winter evenings the most of us can spare a little time for a bit of fancy work. I have been gathering pieces of old silk, satin and ribbons. If the pieces are soiled, wash them, then cut all into strips three-quarters of an inch wide and whatever length the pieces will cut. Fringe the strips at each side, leaving quarter of an inch through the middle; then sew these strips together, bit or miss, and roll into balls, mixing the colors nicely. Take two large bone or wooden knitting-needles and cast on about forty stitches, more or less, according to the size of piece you wish to make. Knit back and forth, garter stitch, until the desired length. Knit loose as possible, and it will look prettier than if very close. This will make a pretty drape. I am going to put mine over the back of a sofa.

It is a little tedious and somewhat troublesome to fringe the edges, for all the pieces cannot be cut the same way of the goods. But after it is knitted it looks so pretty that it will pay you for all the trouble you have been to. Use as many bright colors as possible, mixing the black and other dark colors evenly among them. ILKA.

[To add a pretty finish to the above, save all the ravelings of silk, smoothly folding them in a paper. Then make into tassels, blending the colors nicely, and fasten across each end. Any light silks or ribbons may be colored some pretty, bright shade before raveling.—Ed.]

THE COOKING SCHOOL.

In the women's course in the Agricultural College is found Domestic Science, one of the most useful and practical studies that can be found for women. And nearly parallel is Nursing, a study that attention has been called to by our editor who has suggested that it be put in the curriculum of the women's course at the College. It is not expected that it could be made a training school for professional nurses, but to teach the best methods for preserving as well as regaining the health. Our girls should know what to do in emergency cases, how to proceed until the physician arrives, how best to help the physician, how to read prescriptions and administer doses, how to nurse a fever patient, how to cope with contagious diseases and prevent their spreading, and such other knowledge as cannot be taught under the head of physiology, hygiene, or home sanitation. One authority says: "The capable, well-educated nurse is now regarded as almost as essential as the educated physician."

In my opinion it would be of vastly more service and benefit than mechanics to the co-eds, but my subject is the cooking school which is already a pronounced success under the skillful management of Miss McDermott.

The class is divided into sections and each section has a housekeeper, each girl taking this position in turn. The housekeeper starts the fire; and would you believe some of the girls had never started a fire? Some had never made yeast, and the most proficient had much to learn.

It is quite surprising how much the girls learn in a single term. Different methods of preparing potatoes and oysters and some kinds of vegetables, how to make candies, and in this exercise were taught the poisonous coloring in candies, which to avoid, and much other useful information.

Girls, just try the following recipe and then make up your minds to go to headquarters and learn the thousand and one things pertaining to cooking and household economy.

COOKING SCHOOL CABBAGE.

Chop cabbage fine and cook until tender in salted water, then carefully drain and stir in the white vegetable sauce made as follows: Place in a saucepan one heaping tablespoonful of butter. When melted (be careful not to brown), stir in one tablespoonful of flour, then add one cup of sweet milk slowly, stirring constantly. If too thick, put in a little more milk. Salt and pepper to taste; serve hot.

Life is too short to spend our time in needless and wasteful experiment, when by a little effort and will power we can learn the right and best way of doing things. It took me twenty years to learn to bake a custard to my entire satisfaction, and then I discovered that the proper way in a quick oven was to put the basin in a pan of water. Then I had some of those little mites of seedless raisins that apparently had two stems to every grain. The first time I undertook to prepare some of them I said to the purchaser: "The woman who has patience

to stem those raisins can sing and work to the tune of Auld Lang Syne, whereas my favorite tune to work by is Yankee Doodle." Finally mince meat time came again, and some of those awful raisins still on hand. So I took them, a few at a time, in my hands, and rubbed them briskly, and after spreading them on the table they were easily separated from the stems.

Girls, (there is no higher ambition than to be able to conduct a home in the best possible manner. The noted divine, Dr. Gunsaulus, says: "The woman who can cook a good meal in one language is better than the woman who can't cook a good meal in seven languages." And we are all familiar with the words of Owen Meredith:

"We can live without friends; we can live without books,
But civilized man cannot live without cooks."

PORTLAND. NINA BELLE.

SOME TRIED COOKING RECIPES.

TO DRESS MACARONI.

Have ready a pot of boiling water. Throw a little salt into it, and then by slow degrees put in a pound of macaroni, a little at a time. Keep stirring it gently, and continue to do so very often while boiling. Keep ready a kettle of boiling water to replenish the macaroni pot if it should be in danger of getting too dry. In about twenty minutes it will be done. It must be quite soft, but must not boil long enough to break. When it has boiled sufficiently, pour in immediately a little cold water, and let it stand a few minutes, keeping it covered.

Grate half a pound of rich cheese into a deep dish, and scatter over it a few small bits of butter. Then with a perforated skimmer, commence taking up the macaroni—draining it well—and spread a layer of it over the cheese and butter. Spread over it another layer of grated cheese and butter, and then a layer of macaroni, and so on till your dish is full, having a layer of macaroni on the top, over which spread some butter without cheese. Cover the dish, and set it in the oven for half an hour. It will then be ready to send to table.

Allow half a pound of butter to a pound of macaroni and half a pound of cheese. You may grate some nutmeg over each layer of macaroni.

POTATO PUDDING.

Boil a pound of fine potatoes, peel them, mash them, and rub them through a colander. Stir together to a cream, three-quarters of a pound of sugar, and the same quantity of butter. Add to them gradually half a pint of sweet cream, a teaspoonful of powdered mace and cinnamon, a grated nutmeg, and the juice and grated peel of a large lemon. Then beat six eggs very light, and add them by degrees to the mixture, alternately with the potato. Bake it three-quarters of an hour in a buttered dish; serve warm, without sauce.

MILK BISCUIT.

Cut up three-quarters of a pound of butter in a quart of sweet milk, and set it near the fire to warm till the butter becomes soft; then with a knife, mix it thoroughly with the milk, and set it away to cool. Afterwards stir in half a cupful of strong fresh yeast, and add by degrees as much sifted flour as will make a dough just stiff enough to roll out. As soon as it is mixed, roll it into a thick sheet, and cut it out into round cakes with the edge of a tumbler. Sprinkle a large iron dripping-pan with flour; lay the biscuits in it, cover it and set it to rise near the fire. When the biscuits are quite light, knead each one separately; prick them with a fork, and set them again in a warm place for about half an hour. When they are light again, bake them in a moderate oven.

They should be eaten fresh, and pulled open with the fingers, as splitting them with a knife will make them heavy. ILKA.

USEFUL HINTS.

In mixing stove blacking nothing excels strong soap suds with a few drops of molasses.

If the water from the cistern is dirty and it cannot at once be cleaned out, tie a piece of mosquito net over the pump spout.

Save the inner wrappers from the bars of soap to wipe the flatirons on. They are almost equal to wax paper for the purpose.

A bit of powdered borax added to cold starch renders the articles wrung from it much stiffer, besides giving them an added gloss.

ONE-THIRD cornstarch substituted for the same amount of flour in a white cake makes it whiter and finer of grain than when all flour is used.

Buy bleached butter cloth at five cents a yard and cut circles therefrom to cover the tops of butter crocks. It looks much neater than old muslin.

To banish objectionable odors from a room try burning some ground cloves therein. This gives a particularly pleasant atmosphere, something like incense.

CONSUMPTION CURED.

An old physician retired from practice, had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for all Nervous Complaints. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all who wish it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail, by addressing, with stamp, naming this paper, W. A. NOYES, 820 POWERS' BLOCK, ROCHESTER, N. Y.

A LETTER TO WOMEN

From Mrs. James Corrigan.

For seventeen years I have suffered. Periods were so very painful that I would have to go to the doctor every month.

He said that I had an enlargement of the womb, and told my husband that I must undergo an operation, as I had tumors in the womb, and it was a case of life or death.

I was operated upon twice, but it did not seem to do me any good, it made me very weak. I was troubled with the leucorrhoea a great deal.

I also suffered with the sick headache, vomiting spells, back-ache all the time, terrible pain in my left side, chills, loss of appetite, and could not sleep nights. After taking several bottles of Lydia E. Pinkham's Vegetable Compound, some Liver Pills, and using your Sanative Wash, I recovered.

I can eat well, and every one that sees me tells me I am a different person. I can do all my own work, sleep well and feel well. I am growing stronger every day, and am able to go out and enjoy a walk and not feel all tired out when I return, as I used to. I doctored for sixteen years, and in all those years I did not feel as well as I do at the present time. I wish that every woman that is troubled as I was, would try that medicine. Oh! it is so good to feel well, and it is all owing to Mrs. Pinkham's kind advice and medicine. —MRS. JAMES CORRIGAN, 284 Center St., Jamaica Plain, Mass.



FREE SHORTHAND, TYPEWRITING, BOOKKEEPING, etc., thoroughly taught. Situations Furnished. 56-Page Illustrated Catalogue **FREE.** Address **D. L. MUSSELMAN, Pres.** **GEM CITY BUSINESS COLLEGE, QUINCY, ILL.**

You Dye in 30 minutes Turkey red on cotton that won't freeze, boil or wash out. No other will do it. Carpets, dresses, capes and clothing made to look like new. No failures with Tunk's French Dyes. Send 4c for six packages or 10c. for one. Any color for wool or cotton. Big pay Agents. Write quick.

French Dye Co., Box 77, Vassar, Mich.

MOTHERS Your Children cured or Bed-wetting. Sample free. Dr. F. E. MAY, Bloomington, Ill.

Nabash Line

SHORT ROUTE

Chicago, St. Louis & all points West.

Home-seekers and California tourists, write **B. G. BUTLER, D. F. & P. A., 9 Fort St., West (Hammond Building)**

Detroit, Gd. Rapids & Western R. R.

And Chicago and West Michigan Railway.

Popular routes between Detroit, Lansing, Bay View, Grand Rapids, Petoskey, Manistee, Muskegon.

Trains leave Detroit, Fort St., Station, as follows:

For Lansing and Grand Rapids.....	A. M.	P. M.	P. M.
For Lansing and Greenville.....	7:35	1:10	6:00
Muskegon and Traverse City.....	7:35	1:10	6:00
Petoskey.....	7:35	1:10	6:00
Big Rapids.....	7:35	1:10	6:00

Arrive at Detroit 11:40 a. m., 5:40 and 10:10 p. m.

Daily except Sunday. Parlor cars on all trains.

City Passenger and Freight Office, 7 Fort St., West, Detroit. 'Phone 363.

BLAINE GAVETT, Dist. Pass' Agent.

JAMES AUSTIN, Commercial Agent.

GEO. DEHAVEN Gen. Pass. Agent.

GRAND TRUNK RAILWAY SYSTEM.

Depot foot of Brush St. City office, 84 Woodward Ave. Telephone 39.

Lve. EAST VIA PORT HURON. Arr.

Lve.	EAST VIA PORT HURON.	Arr.
7:55 am	Mt. Clemens, Pt. Huron & North	9:40 am
10:15 am	Toronto, Montreal and Portland	8:25 pm
1:05 pm	Mt. Clemens, Pt. Huron & North	1:30 pm
4:20 pm	St. Clair, Romeo and Pt. Huron	6:00 pm
10:35 pm	Buffalo, Toronto and New York	6:45 am

EAST VIA WINDSOR.

Lve.	EAST VIA WINDSOR.	Arr.
7:45 am	Buffalo, New York and Boston	9:30 pm
12:00 m	Toronto, Buffalo and New York	1:40 pm
6:40 pm	London and Inter Stations.....	5:40 pm
11:25 pm	Suspension Bgo, Buffalo & N. Y.	10:00 am

DETROIT AND MILWAUKEE DIVISION.

Lve.	DETROIT AND MILWAUKEE DIVISION.	Arr.
6:55 am	Saginaw, Gd Haven & Muskegon	9:25 pm
11:30 am	Gd Rapids, Gd Haven & Chicago	8:55 pm
4:45 pm	Saginaw, Gd Rapids & B Creek	11:10 am
6:45 pm	Pontiac & Intermediate Stations	8:10 am
8:00 pm	Lansing, Battle Creek & Chicago	7:55 am
10:45 pm	Gd Rapids, Gd Haven & Muskegon	8:05 am

†Daily except Sunday. *Daily.

Legal Department.

CONDUCTED BY EARL D. BABST
56 Moffat Building, Detroit.

LAW OF INHERITANCE.

Having received numerous questions regarding the distribution of the property of intestates, we have concluded to publish a brief summary of the inheritance laws of Michigan. By way of preface it may be well to define and explain a few terms which will be used in this article.

By *intestate* is merely meant a person who does not make a will. When a person dies intestate the distribution of his estate is governed by statute. It will be remembered that all the laws here laid down refer to persons who die *intestate*.

The *widow's dower* is her life estate in one-third of her deceased husband's real estate.

By the term *real estate* we refer to estates in fee or for the life of another, and not to lesser estates as tenancies for years, etc., which are subject to different rules.

The term *personal property* needs no description.

Right of representation, as here referred to, means the right of the children of a deceased brother or sister to take the share which their parents would take if living.

1st. An unmarried man, a widow or widower who leaves no child or other lineal descendant and an unmarried woman may be treated under the same rules, as the property of each is distributed in the same way. His real estate is divided as follows: (a) It goes to his father and mother in equal shares, or, if one parent is dead, to the surviving parent. (b) If both parents are dead it goes in equal shares to his brothers and sisters and the children of deceased brothers and sisters by right of representation. (c) If he leaves neither father, mother, brothers, sisters nor children of deceased brothers or sisters it descends to his next of kin in equal degree. His personal property is divided in the same way as his real estate.

2d. A widower with issue. In this case also the real estate and personal property are distributed alike. All property goes to the children, and children of deceased children. If there be any, by right of representation. If but one child is left he takes the entire estate. These rules will also cover the case of a widow dying with issue.

3d. A husband or wife dying without issue. The real estate descends as follows: (a) One-half goes to the surviving spouse, and one-half to the father and mother of the deceased, or, if but one parent is living, to the one alone. (b) If neither parent is living one-half goes to the surviving spouse and one-half to the brothers and sisters of the deceased and to the children of deceased brothers and sisters by right of representation. (c) If the deceased spouse leaves none of the relations above spoken of the entire estate goes to the surviving spouse.

However, in the case of a widow, these arrangements are in lieu of dower. She may (by statute of '93) elect, instead, to take her dower. She, however, must make her election within a year after the appointment of the administrator of her husband's estate.

The personal property of a married man dying without issue is distributed thus: (a) If it does not exceed \$1,000 it goes to the widow. (b) If it exceeds \$1,000, one-half of the excess goes to the father of the deceased—the other one-half and \$1,000 going to the widow. (c) If the father is not living, his share goes to the mother, brothers, sisters and children of deceased brothers and sisters in equal shares. (d) If none of these relations are living the whole property goes to the widow.

The rules governing the distribution of the personal property of married women are the same, except that the husband does not receive \$1,000 out of his deceased wife's estate.

4th. If a married man or woman dies, leaving one child, then the child takes all the real estate, but in case of the death of the husband, the child takes subject to the widow's dower interest. As to the personal property, one-half goes to the child and the remainder to the surviving spouse.

5th. Where there is more than one child, the real estate is distributed equally among the children and children of deceased children by right of representation. (In case of the husband's death, subject to the widow's dower interest). As to the personal property, one-third goes to the surviving spouse and two-thirds to the children in equal shares.

6th. Kindred of half blood inherit equally with those of full blood, unless the estate came to the intestate from some of his ancestors, in which case only those who are of the blood of such ancestor inherit.

7th. Children who have been legally adopted are heirs of the persons who adopt them.

RIGHT TO GROWING CROPS ON MORTGAGE FORECLOSURE BY ADVERTISEMENT.—J. H. S., Petoskey, Mich.:—The mortgagor has right to harvest all crops matured up to the day of the expiration of the year of redemption. Upon the expiration of redemption period all his right and interest ceases. If he removes crops after his interest therein has ceased, he is liable for their value to the mortgagee or party in interest.

PEDDLERS AND HAWKERS.—G. O. O., Onekama, Mich.:—I understand the statutes of this State permit a farmer to peddle his produce anywhere within the limits of the

State. Has a city council the power to set aside this privilege and enact ordinances to prevent farmers from peddling on their streets when there is an established open market square?—The statutes on above subject were amended by legislature of 1895, and all the statutes relative thereto ordered compiled. Copies of same can be obtained of Secretary of State. It is the duty of every township board of any township, at a regular or special meeting, to license hawkers, peddlers, and pawnbrokers, and hawking and peddling, and to regulate and license the sale or peddling of goods, wares, merchandise, refreshments, or any kind of property or thing, by any persons going about from place to place in the township for that purpose, or from any stand, cart, vehicle or other device, in the streets, highways, or in or upon any wharves, docks, or open places or spaces, public grounds or public buildings in the township. City and village councils have the same authority as the township boards.

The Markets.

WHEAT.

It has been a see-saw market all week, a day of weakness being followed by a strong market. As compared with a week ago values are $\frac{1}{4}$ to $\frac{1}{2}$ ¢ higher on spot, and about the same on futures. The condition of the winter wheat crop in Europe and this country is being watched closely, and the market will be largely governed from this time forward by the weather. The visible supply is steadily decreasing, but has not yet reached a point which speculators regard as a basis for higher prices. European markets are in the same condition as our own.

The following table exhibits the daily closing sales of spot wheat in this market from February 10 to March 4 inclusive:

	No. 1 White.	No. 2 Red.	No. 3 Red.
Feb. 10.....	88 $\frac{1}{2}$	88	84 $\frac{1}{2}$
" 11.....	87	87	83 $\frac{1}{2}$
" 12.....	87 $\frac{1}{2}$	87 $\frac{1}{2}$	83 $\frac{1}{2}$
" 13.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 14.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 15.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 16.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 17.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 18.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 19.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 20.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 21.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 22.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 23.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 24.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 25.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 26.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 27.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
Mar. 1.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 2.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 3.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$	84 $\frac{1}{2}$
" 4.....	87	87	83

The following is a record of the closing prices on the various deals in futures each day during the past week:

	May.	July.
Friday.....	86	74 $\frac{1}{2}$
Saturday.....	86 $\frac{1}{2}$	75 $\frac{1}{2}$
Sunday.....	87 $\frac{1}{2}$	76 $\frac{1}{2}$
Tuesday.....	87 $\frac{1}{2}$	76
Wednesday.....	87 $\frac{1}{2}$	75 $\frac{1}{2}$
Thursday.....	87 $\frac{1}{2}$	75 $\frac{1}{2}$

The visible supply of wheat on Saturday last, as compiled by the N. Y. Produce Exchange, was 43,777,000 bu., a decrease of 1,418,000 bu. over the amount reported the previous week.

The Adelaide Register estimates the wheat yield of South Australia at 2,690,000 bu., leaving a deficit of 462,000 bu.

Our agent at Buenos Ayres now estimates the exportable surplus for 1897 at 8,000,000 bu. or less than one-half of the small export of 1896. Our correspondent also mentioned general rains, which should benefit the corn crop, but recent mail advices have reported considerable damage from huge swarms of locusts.—Corn Trade News.

Ohio sends reports of damage to wheat by the cold weather, the ground being bare of snow.

So far no unfavorable reports have come from any section of this State, but it must be remembered that the most trying time of the season is just beginning.

The Cincinnati Price Current claims that, allowing 450,000,000 bu as the wheat crop of 1896, there should be about 132,000,000 bu in farmers' hands on March 1.

The shipments of wheat from Argentina during the past five weeks have been 472,000 bu, against 3,992,000 bu for the corresponding period in 1896.

The Corn Trade News now figures the Argentine exportable surplus of wheat at 8,000,000 bu. For February 1 it makes the stocks of wheat at forty prominent continental ports 44,000,000 bu, against 36,000,000 bu same date last year.

The completeness with which the California wheat has been cleaned out this year by the Australian and Indian demand is shown by the published "call board" stocks issued Friday, only 860,000 bu, against 3,150,000 bu last year and about 9,000,000 bu two years ago.

Beerbohm estimates the world's wheat crop will show 36,000,000 bu short of last year on March 1.

The Modern Miller says: "The domestic flour markets are generally dull. Only a few of the southeastern markets report a brisk demand at firm prices. The corn trade in the flour trade is better, the demand good and prices strong. Nearly all markets are paying good prices for bran."

DAIRY PRODUCTS.

BUTTER.

The butter market shows little change since a week ago. Creamery is in good supply, and holds steady at current figures; fancy dairy is scarce, and quite firm, while ordinary to fair stock is in ample supply and barely steady. Quotations in this market range as follows: Creamery, 18 $\frac{1}{2}$ ¢; fancy dairy, 15 $\frac{1}{2}$ ¢; fair to good dairy, 12 $\frac{1}{2}$ ¢; low grade, 7 $\frac{1}{2}$ ¢. At Chicago the market is reported quiet with only a moderate demand. Dairy butter of good quality is fairly active, and stocks are well cleaned up. Receipts of all grades are quite liberal, with quality averaging fair. Values are steady at current figures. Quotations in that market on Thursday were as follows: Creameries—Extras, 18 $\frac{1}{2}$ ¢; firsts, 16 $\frac{1}{2}$ ¢; seconds, 14 $\frac{1}{2}$ ¢. Dairies—Extras, 16 $\frac{1}{2}$ ¢; firsts, 14 $\frac{1}{2}$ ¢; seconds, 12 $\frac{1}{2}$ ¢. Imitation creameries, firsts 18 $\frac{1}{2}$ ¢; ordinary makes, 10 $\frac{1}{2}$ ¢; packing stock, fresh, 8 $\frac{1}{2}$ ¢; roll butter, choice, 10 $\frac{1}{2}$ ¢; off stock 8 $\frac{1}{2}$ ¢. The New York market is not in good shape; receipts are ample, but the quality is only fair, and extras are in light supply. Exporters are out of the market, owing to a decline in prices abroad, and the trade is slow and dragging, with no firmness except in the choicest creameries. Ordinary grades are dull and unsettled. Quotations in that market on Thursday were as follows:

EASTERN STOCK.	
Eastern creamery, fancy.....	18 @ 17
Eastern creamery, choice.....	16 @ 17
State dairy, h. f. tubs, fancy, fresh.....	14 @ 14 $\frac{1}{2}$
State dairy, h. f. tubs, choice.....	13 $\frac{1}{2}$ @
State dairy, h. f. tubs, fair to good.....	11 @ 12
WESTERN STOCK.	
Creamery, Western, fancy.....	19 @
Creamery, Western, choice.....	17 @ 18
Creamery, Western, fair to good.....	13 @ 16
Dairy, Western, firsts.....	13 @ 14
" thirds to seconds.....	8 @ 11
Western imitation creamery, choice.....	15 @
Western imitation creamery, fair to good.....	10 @ 14
Factory, fresh, choice.....	12 @ 12 $\frac{1}{2}$
Rolls, fresh, choice.....	7 @ 11
" common to good.....	8 @ 11

CHEESE.
Our local market holds very steady, and quotations range the same as a week ago, namely, 10 $\frac{1}{2}$ ¢ for the best full cream. It looks as if these figures would gauge the best prices of the year, as the approach of the cheese making season will operate to keep down an advance. At Chicago the finest full cream has advanced since a week ago, and the market is quoted steady for the better class of goods. Shipments are larger than a year ago. Quotations in that market on Thursday were as follows: Full cream—Young Americas, 9 $\frac{1}{2}$ ¢; twins, 8 $\frac{1}{2}$ ¢; brick, full cream, 6 $\frac{1}{2}$ ¢; Swiss, fair to choice, 8 $\frac{1}{2}$ ¢; Limburger, good to choice, 7 $\frac{1}{2}$ ¢. The New York market is reported as fairly active and steady, business being largely confined to the home trade, a further decline in the Liverpool market operating to shut off exports. Still it is not believed that the decline abroad will affect American markets for a time at least, owing to the light stocks available. Receipts at present are quite moderate. Quotations in that market on Thursday were as follows:

New State, full cream, large, white, fancy	
September.....	12 $\frac{1}{2}$ @
Do do late made, prime.....	11 $\frac{1}{2}$ @ 12
Do do good to choice.....	11 $\frac{1}{2}$ @ 11 $\frac{1}{2}$
Do do colored, fancy.....	12 $\frac{1}{2}$ @
Do do do late made, prime.....	11 $\frac{1}{2}$ @ 12
Do do do choice.....	11 $\frac{1}{2}$ @ 11 $\frac{1}{2}$
Do do do fair to good.....	9 @ 11
Do do small, fancy, white.....	12 $\frac{1}{2}$ @ 12 $\frac{1}{2}$
Do do colored, fancy.....	12 $\frac{1}{2}$ @
Do do good to choice.....	11 $\frac{1}{2}$ @ 12
Do do common to fair.....	9 @ 11
Light skims, choice, small size.....	10 $\frac{1}{2}$ @
Do do large.....	10 $\frac{1}{2}$ @
Do do common to prime.....	5 @ 9 $\frac{1}{2}$
Full skims.....	3 @ 3 $\frac{1}{2}$

At Liverpool on Thursday quotations on finest American cheese were 57s. 6d. per cwt for choice American, both white and colored. This is a decline of 1s. from the price as quoted a week ago, and the market is reported weak, owing to heavy receipts from various sources, with a light demand.

BALED HAY MARKET.

DETROIT.		Per ton.
Timothy, No. 1.....	8 50	10 00
do No. 2.....	8 50	9 00
Wye straw.....	6 00	6 25
Rye straw.....	4 50	4 75
Oat straw.....	4 50	4 75

LOOSE HAY.
The following is a report of the sales of loose hay at the Western Hay Scales for the week ending noon, March 4, with the price per ton on each load: Friday—17 loads: Two at \$9; two at \$8.50; four at \$8; two at \$7; two at \$6; one each at \$12.10 and \$6.50. Saturday—4 loads: Three at \$8, and one at \$10. Monday—4 loads: two at \$8; one each at \$8.50 and \$7. Tuesday—16 loads: Two at \$9; three at \$8; three at \$7; three at \$6.50; three at \$6; one each at \$10.50 and \$8.50. Wednesday—9 loads: Two at \$9; three at \$8; two at \$7; one each at \$9, \$8, \$6, and \$5. Thursday—4 loads: One each at \$9, \$8, \$6, and \$5.

CHICAGO.
Market quiet, steady and unchanged. Quotations on Thursday were as follows:
Timothy, choice..... \$ 8 50 @ 9 00
" No. 1..... 8 00 8 50
" No. 2..... 7 00 7 50
Mixed..... 5 00 6 00
Prairie hay..... 6 00 8 00

NEW YORK.
There has been a decline of 50¢ on most grades since a week ago, but since the drop in values the market has ruled stronger. Receipts are not so heavy, and dealers look for an improvement. All small sized bales are \$1 lower than quotations. Quotations in that market on Thursday were as follows:
Prime timothy, large bales..... \$15 00 @ 15 50
No. 1 timothy..... 14 50 15 00
No. 2..... 13 00 14 00
No. 3..... 11 00 12 00
Clover..... 10 50 11 50
Straw—Long rye..... 17 00 18 00
Tangled rye..... 10 00 12 00
Short rye..... 10 00 12 00
Oat..... 7 00 8 00

PHILADELPHIA.
The market has favored buyers under a light demand and plentiful supply. We note a decline of 50¢ per ton on all grades since a week ago. Quotations in that market on Thursday were as follows:
Timothy, choice, large bales..... \$14 00 @
" small bales..... 13 50
" No. 1 large bales..... 13 50
" No. 2..... 11 50 12 00
No. 1 clover, mixed..... 10 50 11 00
No. 2 clover, mixed..... 9 50 10 00
Straw—rye, No. 1, straight new..... 15 00
" No. 2, rye..... 14 50 15 00
" Tangled rye..... 9 50 10 00
Wheat and oat straw..... 8 00 8 50

DETROIT PRODUCE MARKET.

DETROIT, March 4, 1897.
FLOUR.—Quotations on jobbers' lots in barrels are as follows:
Straights..... \$4 50 @
Clears..... 4 20
Patent Michigan..... 4 90 @ 5 00
Rye..... 3 00
Low grade..... 3 75
CORN.—No. 2, 23¢; No. 3, 22 $\frac{1}{2}$ ¢; No. 2 yellow, 24 $\frac{1}{2}$ ¢; No. 3 yellow, 24¢. The visible supply of corn on Saturday last was 25,408,000 bu., a decrease of 5,000 bu. from the previous week.
OATS.—Quoted as follows: No. 2 white, 20¢; light mixed, 18 $\frac{1}{2}$ ¢; No. 3 white, 18 $\frac{1}{2}$ ¢. The visible supply of oats on Saturday last was 13,897,000 bu., an increase of 332,000 bu. since the previous Saturday.
BARLEY.—Quoted at 60¢ @ 65¢ per 100 lbs. The visible supply on Saturday last was 3,315,000 bu. a decrease of 81,000 bu. since the previous Saturday.
RYE.—Quoted at 35 $\frac{1}{2}$ ¢ per bushel for No. 2. No. 3 sells at 33¢. The visible supply of rye on Saturday last was 3,582,000 bu., a decrease of 285,000 bu. since the previous Saturday.
CLOVERSEED.—Prime spot, \$4.65 per bu.; No.

2 quoted at \$4 00 @ 4 40. At Toledo prime is quoted at \$4 75 for spot and March delivery. Market active.

TIMOTHY SEED.—Quoted at \$1 35 per bu.
FEED.—Bran, \$10; coarse middlings, \$10; fine middlings, \$12 00; corn and oat chop, \$8; cracked corn, \$9; coarse cornmeal, \$9. These prices are for car load lots; small lots are \$1 per ton higher.

BUTTER.—Market steady. Quoted at 15 $\frac{1}{2}$ ¢ for best dairy; good, 12 $\frac{1}{2}$ ¢; common to fair 10 $\frac{1}{2}$ ¢; creamery, 18 $\frac{1}{2}$ ¢.

CHEESE.—New Michigan full cream, 10 $\frac{1}{2}$ ¢ @ 11¢.
BEANS.—Quoted at 65¢ per bu for hand picked in car lots; unpicked, 48¢ @ 55¢ per bu. At New York quotations on Thursday were as follows: Marrow per bu, 90¢ @ 115¢; medium, 80¢ @ 92 $\frac{1}{2}$ ¢; pea 75¢ @ 87 $\frac{1}{2}$ ¢; red kidney, choice, \$1 10 @ 1 30. Market dull and declining.

EGGS.—Strictly fresh selling at 12 $\frac{1}{2}$ ¢ @ 14¢ per doz.
ONIONS.—Michigan, 80¢ @ 1 per bu; home-grown Spanish, 75¢ per bu.

POTATOES.—Quoted at 20¢ @ 27¢ per bu. At Chicago quotations on Thursday were as follows: Early Rose, 19¢ @ 21¢; Hebrons, 19¢ @ 22¢; Burbanks, 22¢ @ 25¢ per bu.

APPLES.—Quoted at 60¢ @ 90¢ per bbl for common; good \$1 @ 1 50; no fancy, one sale. Market firmer.

CRANBERRIES.—Quoted at \$2 per bu.
DRIED APPLES.—Sun-dried, 1 $\frac{1}{2}$ ¢ @ 2¢; evaporated, 3 $\frac{1}{2}$ ¢ @ 4 $\frac{1}{2}$ ¢ per lb.

HONEY.—Quoted at 11¢ @ 12¢ in sections, for white, and 9¢ @ 11¢ for dark comb; extracted, 5¢ @ 6¢ per lb. At Chicago it is quoted as follows: White clover, 1-lb sections fancy, 12¢, broken combs, 7¢ @ 9¢; amber to dark comb, 7¢; extracted, 5¢ @ 7¢ per lb.

BEEWAX.—Prime, 22¢ @ 24¢ per lb.

HIDES.—Green, No. 1, 5 $\frac{1}{2}$ ¢; cured, No. 1, 6 $\frac{1}{2}$ ¢; No. 2, 5 $\frac{1}{2}$ ¢; calf No. 1, green, 8¢; cured, No. 1, 8¢; No. 2, green, 6 $\frac{1}{2}$ ¢; No. 2 cured calf, 6 $\frac{1}{2}$ ¢.

POULTRY.—Dressed chickens, 7¢ @ 8¢; dressed turkeys, 12¢ @ 12 $\frac{1}{2}$ ¢; dressed ducks, 10¢ @ 11¢; geese, 8¢. Live quoted 12¢ below the above figures.

Quotations at Chicago are: Dressed—Turkeys, 11¢; young gobblers 9 $\frac{1}{2}$ ¢; chickens, old and young hens, 6 $\frac{1}{2}$ ¢ @ 7 $\frac{1}{2}$ ¢; roosters, old, 4 $\frac{1}{2}$ ¢ @ 5¢; ducks, 9¢ @ 11¢; geese, 6¢ @ 8¢ per lb.

DRESSED VEAL.—Quoted at 6 $\frac{1}{2}$ ¢ @ 7¢ for ordinary to good carcasses, and 7 $\frac{1}{2}$ ¢ @ 8¢ for fancy.
DRESSED HOGS.—Quoted at \$3 50 @ 3 75 per cwt with \$4 @ \$4 25 paid for fancy.

PROVISIONS.—Quotations are as follows:
Mess pork..... \$ 8 00 @
Short mess..... 8 50
Short clear..... 8 25
Lard in tierces, 5 lb, compound..... 4 $\frac{1}{2}$
Pure lard, 5 lb..... 5 $\frac{1}{2}$
Hams, 7 lb..... 9 $\frac{1}{2}$ @ 10
Shoulders, 7 lb..... 5 $\frac{1}{2}$
Choice bacon, 7 lb..... 7 $\frac{1}{2}$
Extra mess beef, new 5 lb..... 6 50
Plate beef..... 7 00
Tallow, 7 lb..... 3

OILS.—Raw linseed, 31¢; boiled linseed, 33¢ per gal. less 1¢ for cash in 10 days; extra lard oil, 42¢; No. 1 lard oil, 33¢; water white kerosene 84¢; fancy grade kerosene, 9¢ @ 10 $\frac{1}{2}$ ¢; deodorized gasoline, 9¢ per gal.; turpentine, 34¢ per gal., in barrel lots, less 1¢ for cash in 10 days. Less quantities, 40¢ per gal.

HARDWARE.—Axes, single bit, bronze, \$5 50; double bit, bronze, \$10; single bit, solid steel, \$6 50; double bit, solid steel, \$10 50 per doz; bar iron, \$1 50 rates; carriage bolts, 75¢ per cent of new list; tire bolts, 70¢ and 10¢ per cent of new list; painted barbed wire, \$1 75; galvanized barbed wire, \$2 05 per cwt; single and double strength glass, 70¢ and 5¢ per cent off list; No. 24 sheet iron, \$2 50 rates per cwt; galvanized, 75¢ and 10¢ per cent off list; No. 1 annealed wire, \$1 40 rates. Wire nails, \$1 65; steel cut nails, \$1 60 per cwt. new card.

COFFEES.—City prices are: Rio, roasting, 15¢; fair, 16¢; good, 21¢; prime, 20¢; choice, 22¢ @ 23¢; fancy, 25¢ @ 30¢; Maracibo, roasted, 25¢; Santos, roasted, 24¢; Mocha, roasted, 29¢; Java 32¢.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

DETROIT, Mich., Mar. 4, 1897.

CATTLE.
Thursday's receipts of cattle numbered 548 head, from the west, direct to butchers 38, on sale 510; one week ago 483. Market quiet with sales at about last week's prices. The highest price paid was \$4 25 for 4 good steers av 1,35

McHugh sold Caplis & Cross 5 steers av 946 at \$3.65; 2 cows av 915 at \$2.75, and 3 stockers av 640 at \$3.85.

Winegar sold Bradford 12 stockers av 677 at \$3.25. Adgate sold Sullivan a bull weighing 1,220 at \$2.65, and 20 steers and heifers av 802 at \$3.40.

Gleason sold Mich Beef Co 18 good butchers steers av 905 at \$3.70.

York sold Fitzpatrick 5 steers and heifers av 790 at \$3.45, and 8 mixed av 972 at \$2.65.

Dennis sold Caplis & Cross 9 cows av 1,025 at \$2.65, and 12 steers and heifers av 854 at \$3.60.

Stoll & C sold Sullivan 4 steers av 1,350 at \$4.25 and 8 steers and heifers av 1,100 at \$3.57.

Robb sold Fitzpatrick 10 steers av 945 at \$3.60.

Spicer & M sold Kamman 3 heifers av 810 at \$3.40 and 6 mixed butchers av 580 at \$3.25; also 8 steers and heifers to Caplis & Cross av 987 at \$3.50.

Coyne sold Schleicher 10 mixed butchers av 613 at \$3.00.

Prucha sold Loosemore 2 fat cows av 1,960 at \$3.85. Spicer & M sold Kamman 3 mixed butchers av 866 at \$2.75; a bull weighing 850 at \$2.75 and 3 steers av 1,043 at \$3.60; also 13 steers and heifers to Sullivan av 840 at \$3.50.

Hubert sold Fitzpatrick 3 do av 853 at \$3.50 and 5 cows av 1,083 at \$2.55.

Roe & Holmes sold Robinson 8 mixed butchers av 831 at \$2.50; 5 steers and heifers av 790 at \$3.40; 4 mixed butchers av 807 at \$2.75 and 2 do av 855 at \$3.25; to Cook & Fry 7 steers and heifers av 817 at \$3.40 and a bull weighing 800 at \$2.60; to Fitzpatrick 3 cows av 1,093 at \$2.50; to Caplis & Cross 4 good butchers' steers av 1,182 at \$3.85; to Sullivan 2 thin oxen av 1,410 at \$3.70; to Caplis & Cross 4 mixed butchers av 980 at \$2.85 and 3 steers av 923 at \$3.50.

SHEEP AND LAMBS.

The receipts of sheep and lambs numbered 2,039 head Thursday, compared to 2,338 one week ago. Market rather slow and prices 10c lower than last Friday's closing. Range of prices, good lambs, \$4.00@4.50; light to good, \$3.75@4.35; good mixed \$3.65@4.35; fair to good mixed butchers, \$2.50@3.00.

Roe & Holmes sold Ward 101 lambs av 77 at \$4.70. Sharp sold Mich Beef Co 134 lambs av 90 at \$4.75. Bandfield sold Loosemore 46 mixed av 85 at \$3.60. Akeley sold Monahan 46 mixed av 73 at \$3.50. Burden sold same 35 mixed av 72 at \$3.50. Hogan sold Duff 26 mixed av 90 at \$3.75. Estep sold Sprague 149 lambs av 76 at \$4.55. Leach sold Mich Beef Co 50 most lambs av 77 at \$4.50.

Sharp sold Young 81 lambs av 68 at \$4.35, and 18 mixed to Loosemore av 62 at \$3.35.

Howe sold Hiser 11 mixed av 99 at \$3.50.

Patrick sold Fitzpatrick 55 mixed av 63 at \$3.75.

McHugh sold Monahan 116 mixed av 75 at \$3.60.

Penner sold Ward 43 lambs av 77 at \$4.50.

Dennis sold Fitzpatrick 64 mixed av 73 at \$3.50.

Bergen & T. sold Loosemore 75 mixed av 80 at \$3.70.

HOGS

Hog receipts Thursday 3,170 head, compared to 2,318 one week ago; of fair average mixed quality. Market active and unchanged from last Friday's closing. Range of prices \$3.50 to \$3.75. Mostly \$3.65 to \$3.70. Stags 1/2 off. Rough and heavy \$2.80 to \$3.40. Pigs 3/4 off to \$3.80.

Roe & Holmes sold Parker, Webb & Co 78 av 161 lbs at \$3.70.

Proper sold same 63 av 184 at \$3.60.

Lewis sold same 49 av 209 at \$3.65.

Weeks sold same 78 av 172 at \$3.67.

Leach sold same 54 av 198 at \$3.65.

Joe McMullen sold same 96 av 175 at \$3.70.

Adams sold same 69 av 206 at \$3.70.

Howe sold R S Webb 28 av 164 at \$3.70.

Walls sold same 61 av 163 at \$3.65.

Brophy sold same 78 av 193 at \$3.75 and 53 av 154 at \$3.70.

Stephens sold Hammond S. & Co 61 av 210 at \$3.65.

Simmons sold same 69 av 199 at \$3.65.

Coats sold same 112 av 153 at \$3.70.

Roe & Holmes sold Bradford 22 pigs av 107 at \$3.80.

Hubert sold Parker, Webb & Co 28 av 174 at \$3.65.

Luck sold same 105 av 192 at \$3.70.

Reason sold same 19 av 173 at \$3.65.

Burden sold same 30 av 202 at \$3.67.

Bergen sold same 17 av 217 at \$3.65.

Smith sold same 30 av 149 at \$3.65.

Pakes sold same 62 av 212 at \$3.70.

Vleet sold same 16 av 169 at \$3.70.

Mc Hugh sold same 76 av 186 at \$3.65.

Watson sold same 31 av 193 at \$3.67.

Brumm sold same 14 av 205 at \$3.70.

Dennis sold same 49 av 192 at \$3.70.

Weeks sold Parker, Webb & Co 153 av 188 at \$3.70.

Robb sold same 13 av 245 at \$3.65.

Roe & Holmes sold same 43 av 161 at \$3.70.

Taggart sold same 15 av 234 at \$3.65.

Haley sold same 61 av 165 at \$3.70.

Roe & Holmes sold same 77 av 186 at \$3.70.

Sharp sold Hammond S. & Co 51 av 186 at \$3.65.

Clark & Belhimer sold same 30 av 180 at \$3.65.

Spicer & Merritt sold same 23 av 194 at \$3.65.

Coyne sold same 57 av 179 at \$3.65.

Clark & B sold R S Webb 71 av 201 at \$3.70.

Gleason sold Sullivan 85 av 161 at \$3.65.

Ansty sold same 19 av 173 at \$3.65.

Wilson sold same 15 av 183 at \$3.65.

Estep sold Sprague 34 av 181 at \$3.65.

McHugh sold Parker, Webb & Co 78 av 186 at \$3.65.

Spicer & M sold Hammond S. & Co 43 av 156 at \$2.65; 29 av 249 at \$3.65; 2 av 196 at \$3.70, and 22 av 209 at \$3.65.

FRIDAY, Mar. 5, 1897.

CATTLE.

Friday's receipts of cattle numbered 156 head, through 95, on sale 61; one week ago 214. Quality not very good. The few here sold early at strong yesterday's prices. Veal calves and milch cows steady at above quotations.

Bandfield sold Caplis & Cross 7 mixed butchers av 980 at \$2.50; 2 heifers av 615 at \$3, and 4 steers and heifers av 887 at \$3.50.

Roberts & Spencer sold Loosemore 6 cows av 916 at \$2.50.

Richmond sold Sullivan 5 stockers av 674 at \$3.25, and a cow to Marx weighing 1,000 at \$2.50.

Doddy sold same 2 cows av 1,005 at \$2.75.

Harger & L sold Mich Beef Co a good sausage bul weighing 1,380 at \$2.90, and 2 bulls to Moore av 566 at \$2.60.

Waukenhaut sold Caplis & Cross 2 common butchers cows av 1,050 at \$2.35.

Fox & Bishop sold Sullivan 7 stockers av 835 at \$3.25, and 2 bulls av 1,025 at \$2.50; also a fat bull to Mohr weighing 610 at \$2.75.

SHEEP AND LAMBS.

Friday's receipts of sheep and lambs numbered 1,462 compared to 720 one week ago. Trade was active and prices steady to strong. Five dollars was the highest price paid for good lambs av 95 to 103 lbs; balance as noted. All sold; closing firm.

H. Horner sold Young 20 mixed av 85 at \$3.83, and 9 lambs av 103 at \$5.

Murphy sold Ward 92 lambs av 92 at \$4.77.

Haley Bros. sold Mich Beef Co 77 lambs av 70 at \$4.60, and 20 mixed av 115 at \$3.60.

Ansty sold Hammond S. & Co 42 lambs av 70 at \$4.25.

Sutton sold Ward 69 lambs av 71 at \$4.70.

Watson sold Hammond S. & Co 35 lambs av 58 at \$4.37.

Brumm sold Fitzpatrick 69 lambs av 71 at \$4.70.

Roberts & Spencer sold Mich Beef Co 127 most lambs av 70 at \$4.15, and 46 mixed butchers av 70 at \$2.75.

Jedele sold Kamman 30 most lambs av 70 at \$4 and 46 lambs to Judson av 90 at \$4.80.

FW Horner sold Hammond S. & Co 58 lambs av 96 at \$5 and 32 sheep and lambs to Caplis & Cross av \$5.84.

Waukenhaut sold Sutton 120 most lambs av 81 at \$4.65.

Lomason sold Mich Beef Co 56 lambs av 80 at \$4.50 and 19 mixed av 80 at \$3.60.

Underwood sold Sutton 75 lambs av 70 at \$4.50.

McMullen sold same 109 lambs av 80 at \$4.60 and 24 mixed av 80 at \$3.60.

Lovewell sold McIntyre 24 most lambs at 75 at \$4.50.

Eddy & F sold Mich Beef Co 49 lambs av 80 at \$4.75 and 30 mixed av 75 at \$3.65.

HOGS.

The receipts of hogs numbered 1,568 head; one week ago 976. Market active and strong at above quotations. Bulk sold to-day at \$3.70.

Tainage sold Hammond S. & Co 74 av 186 at \$3.70.

Moore sold same 120 av 190 at \$3.70.

Lovewell sold same 53 av 195 at \$3.70.

Sleeper sold same 34 av 158 at \$3.70.

McMullen sold same 80 av 195 at \$3.70.

Warren & D sold same 77 av 190 at \$3.70.

H. Horner sold Sullivan 131 av 164 at \$3.72.

Roe & Holmes sold Parker, Webb & Co 33 av 231 at \$3.70; 53 av 153 at \$3.70; 61 av 175 at \$3.70, and 48 av 189 at \$3.70.

Strubel & C sold Hammond S. & Co 51 av 172 at \$3.65.

Smith sold same 55 av 169 at \$3.65.

Wilson sold same 64 av 180 at \$3.70.

Bandfield sold same 112 av 210 at \$3.65.

Boettner sold Parker Webb & Co 67 av 155 at \$3.70.

Hanser sold Hammond S. & Co 73 av 197 at \$3.70.

Richmond sold Parker Webb & Co 62 av 170 at \$3.70.

Lomason sold same 27 av 161 at \$3.70.

Roe & Holmes sold same 10 av 411 at \$3.50, and 49 av 228 at \$3.70.

Jedele sold same 36 av 182 at \$3.70.

Judson sold same 23 av 225 at \$3.67.

Harger & L sold Hammond S. & Co 87 av 140 at \$3.70.

Harger sold same 75 av 156 at \$3.70.

Fox & B sold same 83 av 190 at \$3.65.

Cassidy sold same 108 av 185 at \$3.70.

OUR BUFFALO LETTER.

EAST BUFFALO, March 4, 1897.

CATTLE.—Receipts of cattle on Monday last were 6,200, as compared with 5,500 for the same day the previous week; and shipments were 4,302, as compared with 4,290 for the same day the previous week. Of the receipts 68 were Canadian. Monday the market ruled slow, with a large supply of stock offering. Good steer cattle declined 10¢ to 25¢, and other grades also showed weakness; fat cows and heifers were firmer, bulls held steady, while oxen were lower. Stockers and feeders were in large supply and lower for the choicest lots. Since Monday the market held about steady, but trade has been slow, and outside of a fair demand for good butchers' cattle, all grades have been weak. Veal calves have held firm, and so have milch cows. Quotations at the close on Wednesday were as follows: Export and shipping steers.—Prime to extra choice steers, 1,450 to 1,600 lbs., \$4.00@4.25; do. 1,300 to 1,400 lbs., \$3.75@4.00; good to choice fat steers, 1,450 to 1,600 lbs., \$4.00@4.25; good choice fat steers, 1,300 to 1,400 lbs., \$3.75@4.00; good to choice fat smooth steers, 1,100 to 1,300 lbs., \$3.25@4.50; coarse and rough fat steers, 1,100 to 1,450 lbs., \$3.00@4.25. Butchers' native cattle.—Fancy smooth dry fed light steers, 900 to 1,000 lbs., \$4.00@4.25; fat smooth dry fed light steers, 900 to 1,000 lbs., \$3.75@4.00; green steers thin to half fattened, 1,000 to 1,400 lbs., \$3.50@3.75; fair to good steers, 900 to 1,000 lbs., \$3.50@3.75; choice smooth fat heifers, \$3.75@3.90; fair to good fat heifers, \$3.25@3.65; light, thin half fat heifers, \$2.75@3.15; fair to good mixed butchers stock, fat and smooth, \$3.10@3.65; mixed lots, fair quality fat cows and heifers, \$2.40@3.30; good smooth well fattened butchers cows, \$3.10@3.30; fat butchers cows, \$2.40@3.00; common old cows, \$2.00@2.40. Stockers, feeders, bulls and oxen.—Feeding steers, good style and quality, \$3.50@3.70; fair to good weight stockers, 650 to 750 lbs., \$3.25@3.40; light, thin and only fair stock steers, \$3.00@3.15; light stock heifers and yearlings, \$2.75@3.25; export weight bulls, fat and smooth, \$3.60@3.75; good fat smooth butchers bulls, \$3.25@3.50; fair to good sausage bulls, \$2.65@3.00; thin old, common bulls, \$2.25@2.40; stock bulls, \$2.40@2.65; fat smooth young oxen, to fit for exports, \$3.00@3.25; fair to fair young oxen, 1,050 to 1,150 lbs., \$2.25@2.50; old, common and poor oxen, \$2.00@2.25. Veal calves.—Common to fair, \$4.00@5.00; good to choice, \$5.25@5.75; prime to extra, \$6.00@6.25. Milch cows.—Strictly fancy, \$3.50@4.00; good to choice, \$3.00@3.40; poor to fair, \$1.50@2.50; fancy springers, \$3.40@4.50; fair to good, \$1.60@3.00; common milkers and springers, \$1.40@2.16. Thursday the market was firmer on good, prime fat cattle, and the outlook is regarded as favorable to the coming week.

SHEEP AND LAMBS.—Receipts Monday were 16,100 as compared with 29,200 the previous Monday; shipments were 11,200 as compared with 17,400 same day the previous week. Monday the market opened slow and easy for lambs, but steady for sheep. Since Monday about the same conditions have ruled, and lambs show a decline of 5¢ to 10¢ since a week ago, while sheep have advanced 5¢ to 10¢ from the prices of a week ago. Good sheep are scarce, there being less disposition to sell breeding stock at present than for several years. The lambs, largely cross-breds, however, are not considered so desirable to retain in the flock, and are being marketed whenever ready. Quotations at the close on Wednesday were as follows: Native sheep.—Selected handy weight wethers, \$4.30@4.40; mixed sheep, choice to prime, \$3.90@4.15; do. fair to good, \$3.75@3.90; do. common to fair, \$3.50@3.65; cull sheep, common to good, \$2.60@3.40; heavy export sheep, mixed ewes and wethers, \$4.00@4.25; selected, prime export wethers, \$4.25@4.35; bucks fair to good, \$2.00@2.75. Native lambs.—Extra to prime selected, \$5.00@5.15; good to choice, \$4.85@4.90; common to fair, \$4.40@4.75; culls, common to good, \$3.75@4.25; yearlings, fair to extra, \$4.25@4.50. Thursday the market was more active and the feeling a shade firmer on lambs. Prime lambs sold at \$5.00@5.25; export lambs, \$5.25; fair to good, \$4.50@5.00; culls, \$4.40@5.00. Sheep firm.

Hogs.—Receipts of hogs on Monday last were 22,880, as compared with 23,300 for the same day the previous week; and shipments were 16,480 as compared with 16,800 for the same day the previous week. The hog market shows some improvement since a week ago. It opened stronger and a shade higher on good, light hogs on Monday, while other grades were unchanged. Since Monday medium and heavy hogs have advanced, selling @10¢ high-

er than a week ago, while choice pigs and yorkers have held firm at Monday's advance. Some choice, light white hogs brought \$3.95 Wednesday. The market closed firm. Quotations at close on Wednesday were as follows: Good to choice 185 down to 160 lbs., \$3.85@3.90; good to choice pigs and light yorkers, 125 to 150 lbs., \$3.90@3.95; mixed packing grades, 175 to 200 lbs., \$3.85; fair to best medium weights, 210 to 260 lbs., \$3.80@3.85; good to prime heavy hogs of 270 to 300 lbs., quotable, \$3.80; Rough, common to good, \$3.15@3.40; stags, rough to good, \$2.50@3.00; pigs light, 100 to 120 lbs. good to prime corn fed lots, \$3.80@3.85; pigs, common, thin, skippy to fair quality, \$3.50@3.75. Thursday the market was strong and active, with a good demand, and all offered were sold. Market closed firm. Pigs and light sold at \$3.95@4; mixed packing and heavy, \$3.85@3.90.

CHICAGO.

UNION STOCK YARDS, March 4, 1897.

CATTLE.—The receipts for last week were 44,632 against 47,845 for the previous week, and 46,157 for the corresponding week in 1896. Up to and including Wednesday of this week the receipts have been 27,028, as compared with 33,094 for the same days last week, a decrease of 6,000 head. The market has improved since Monday, showing an advance of 10¢ to 15¢ up to the close of Wednesday; but with the advance values are no higher than a week ago. Really choice cattle are scarce, and are relatively stronger than other grades. Good plain steers and butchers' cattle are in request, and rule firm. Texans are also steady to strong. Veal calves are lower than a week ago, but in good demand. Sales on Wednesday were made at \$3.60@4.25 for common to fair dressed beef steers up to \$4.50@5 for good to rather choice shipping and export cattle, with prime lots scarce and largely nominal at \$5.10@5.35. There was no improvement in the quality of the offerings, and the bulk of the steers sold at \$4.10@4.75. The stocker and feeder trade showed the usual animation, with sales mostly at \$3.35@4.20, good light weight steers being largely wanted. Butchers' and canners' stuff shared in the general advance, cows and heifers selling largely at \$2.40@3.75, and bulls at \$2.25@3.40; calves sold at a range of \$5.25@6.10. Thursday receipts were estimated at 11,000; market ruled steady, but closed weak to 10¢ lower; fair to best beef sold at \$3.65@5.35; stockers and feeders, \$3.25@4.20; mixed, cows and bulls, \$1.80@4.10; Texas, \$3.25@4.30.

SHEEP AND LAMBS.—Receipts for the past week were 61,447 as compared with 62,556 the previous week, and 62,833 for the corresponding week in 1896. Up to and including Wednesday of this week receipts have been 34,604, as compared with 37,880 for the same days last week, a decrease of 3,000. Business on Wednesday was active and prices again rather on the upturn than otherwise, with about everything sold at an early hour. The general market, together with prices, was about the same as yesterday. Western sheep sold at \$3.90@4.15; western yearlings at \$4.15@4.35; western lambs, \$4.60@4.65; the Colorado lambs, \$4.75@5. A few extra native lambs sold at \$5.25@5.25; mediums at \$4.75@4.80, and others at \$4.24@5.00. Thursday receipts were 15,000. Market slow, with native sheep selling at \$2.75@3.30; western, \$3.50@4.20; lambs, \$3.15@3.15.

HOGS.—The receipts for last week were 188,386 against 187,927 for the previous week, and 217,767 for the corresponding week in 1896. Up to and including Wednesday of this week, receipts have been 100,049, as compared with 106,987 for the same days last week, showing a decrease of 6,000 head. The short supply makes a steady to strong market each day, and prices are steadily advancing. On Wednesday morning there was considerable of a rush on the part of buyers to get in early, hence the first sales showed an advance of about a nickel, but after the urgent shipping orders were out of the way values dropped back to about Tuesday's close, rather easier than otherwise, with quite a number left unsold. Rough and common packers sold at \$3.30@3.45; prime heavy packers and good mixed, \$3.55@3.67; prime mediums and butcher weights, \$3.65@3.75; prime assorted light, \$3.75, a few at \$3.80@3.82. A few lots of light mixed sold at \$3.70. Receipts on Thursday were estimated at 33,000. The market ruled active at Wednesday's average prices, but the outside figures were not reached.

SAVE THE SKIM MILK.



Farmers are just beginning to realize that practically all of the fertilizing value of milk is in the skim milk and none of it in the cream. To keep the skim milk at home use a **SAFETY Hand Separator**

This skim milk is worth fifteen cents per hundred pounds for feed. Save it. Send for circulars.

P. M. SHARPLES, ELGIN, ILL.

WANTED. 25,000 bushels Shell Corn. 10,000 bushels Beans. No cull beans wanted. H. C. WARD, Pontiac, Mich.

DO YOU WANT Bigger crops and better times? then write to JACOB REESE, 400 Chestnut Street, Philadelphia, for price of the Slog Phosphate.

FARM SCALES!



Guaranteed first-class in every respect. Buy direct and save middlemen's profit. Write for prices and description before purchasing elsewhere.

GRAND RAPIDS SCALE WORKS, Grand Rapids, Mich.

ACME PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

Adapted to all soils, all work. Crushes, cuts, lifts, pulverizes, turns, levels the soil in one operation. Made entirely of cast steel and wrought iron—practically indestructible.

Cheapest riding harrow on earth, \$8.00 and up.

SENT ON TRIAL To be returned at my expense if not satisfactory. N. B.—I deliver free on board at distributing points.

DUANE H. NASH, Sole MFR., Millington, New Jersey, and 30 So. Canal St., Chicago.

MY MARVELOUS CURE

OF Rheumatism, Neuralgia, Catarrh and Nervousness.

Swanson Rheumatic Cure Co.,

February 8, 1897.

DEAR SIR: I feel it my duty to write what 5 Drops has done for me, as I have read two testimonials published, which I don't think are anything to compare with my marvelous cure. I have been a sufferer with rheumatism for four years, and have tried many doctors and all kinds of medicines without effect, and have made two visits to the Hot Springs of Arkansas, which only gave me temporary relief. During the four years of my illness I suffered more than my tongue could express, with a complication of diseases, Rheumatism, Neuralgia, Nervousness, Heart Weakness (so I could not lay on my left side at all), and worst of all a very severe and obstinate case of Catarrh of the Throat. In September, 1896, I was stricken down with a fresh and terrible attack of Rheumatism, combined with all my other chronic ailments, and my friends despaired of my ever recovering. By some providential chance I managed to get a bottle of 5 Drops. Now it is three months that I have been taking 5 Drops. I took it just as directed and commenced to mend from the first dose and have continued to improve. My cure is indeed wonderful for I am now able to walk without a crutch and feel like a new man. I am free from the severe pains in my sides and my nerves are a great deal better. My catarrh has disappeared and I can sleep on either side—something I have not been able to do in years. By this you can see what wonderful things 5 Drops has done for me and I give 5 Drops all the praise, for in three months I have taken nothing else but a little cod liver oil. I trust this statement will be of benefit to those suffering with similar diseases. I cannot praise 5 Drops too much. You may publish this letter as I can verify my statements to any one making inquiry.

Yours very sincerely,

J. P. WALLING, Roff, I. T.

If you have not sufficient confidence after reading this letter to send for a large bottle, send for a sample



[TRADE MARK]

bottle, which contains sufficient medicine to convince you of its merit. This wonderful curative gives almost instant relief and is a permanent cure for Rheumatism, Sciatica, Neuralgia, Dyspepsia, Backache, Asthma, Hay Fever, Catarrh, Sleeplessness, Nervousness, Nervous and Neuralgic Headaches, Heart Weakness, Toothache, Earache, Croup, "La Grippe," Malaria, Creeping Numbness, Bronchitis and kindred diseases.

"FIVE DROPS" is the name and dose. Large bottles (300 doses), \$1.00. Six bottles for \$5.00. Sample bottle prepaid by mail, 25 cents. Not sold by druggists, only by us and our agents. Agents appointed in new territory.

SWANSON RHEUMATIC CURE CO.,

167 Dearborn St., Chicago, Ill.

Established 1886.

SWOPE, HUGHES, JOHN HUGHES, HIRSH WALTZ, JOHN BENSTEAD,

WALTZ & BENSTEAD,

Live Stock Commission Merchants,

No. 4 Exchange Building,

EAST BUFFALO, - N. Y.

MODERN HOUSE, Detroit, nearly new, ten rooms, fruit, vegetable and field crop farms. Great street, near car line; will exchange for unencumbered cottage or farm. Give full particulars and value 26 Eas Washington, Ann Arbor, Mich.

20 Acres Rich, Level Farm Land, free from rocks and swamps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$500, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets, in thickly settled section of Virginia. Genial climate all year. Splendid water, schools, churches, stores, mills, and desirable neighbors. Deed free and title guaranteed. No malaria, mosquitoes, blizzards or floods. Taxes and freight rates low. For further information write to D. L. RISLEY, 211 S. 10th St., Philadelphia Pa.

FARMS \$15 to \$35 PER ACRE. Good soil and water. Bought in hard times for cash. For sale on easy terms. No agents. THE RECORD COMPANY, Sioux City, Iowa.

SOUTHERN TEXAS HOMES IN

In the celebrated Coast Country. Cheap and on reasonable terms. Fruit, vegetable and field crop farms. Great production. Direct markets. Direct conveyance. Travel via Frisco Line from St. Louis. For land literature, maps, excursion rates and full information, write THE AMERICAN LAND COMPANY, 511 Pine Street, ST. LOUIS, MO.

The Detroit College of Commerce, BORTHARD INSTITUTE and SCHOOL OF TELEGRAPHY. \$75 to Graduate in either Department. Write for College Journal to WM. E. CATON, Supt., 11 to 17 Rowland St., Detroit, Mich.

Wanted—An Idea Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & CO., Patent Attorneys, Washington, D. C. for their \$1.00 per offer and new list of one thousand inventions wanted.

Horticultural.

For the Michigan Farmer.

THE GREAT POSSIBILITIES OF THAT OTHER VARIETY.

Every spring we hear something like the following statements: "I believe that if I had such a variety of strawberry or such and such a strain of blackberries or raspberries I could make some money."

What a delusion that "other" variety generally is. We read, from some fruit catalogue, the glowing results of some wonderful berry or vegetable and from these accounts we figure out great possibilities for ourselves, if we only had some of the plants. That our anticipations may be realized, we pay a high price for a few of them, and the results are similar to thousands of other similar experiments—a failure.

Who are the successful fruit-growers? Is it those who are always trying every new thing that comes along? It is most invariably those who stick to one thing and push it to its utmost that make the money. Those who jump from one thing to another seldom make a success of anything.

We have some varieties of fruit that do much better some seasons than others. Take strawberries, for instance. The Burbach and Cumberland in a dry season are grand berries, but in a wet one they are dismal failures. Then some springs late frosts come and the blossoms of certain varieties are blasted, while others escape. It is not generally known that pistillate kinds are harder than staminate ones.

Some varieties require less fertility than others, some heavier soil, others higher temperature, and so it goes through all kinds of fruit as well as vegetables.

We should not be in too great a haste to discard an old variety, but give it different opportunities to develop. If it proves a failure in one location, try it in another, if a failure in one season, the next may be a success. I tried a certain variety of strawberry four different years, on as many different soils and locations, before I would discard it as a failure. At another time I tried a variety three years before I found a situation that made it a success.

I lately visited a grower who is yet growing the old Wilson strawberry, and I doubt if there is another berry on the market that can show greater results than what this man produced.

I find others who are still growing old varieties of fruit and vegetables that have attained a moderate success in their line of business.

KALAMAZOO CO., Mich.

B. A. WOOD.

For the Michigan Farmer.

ABOUT THE CHEAP SUBSTITUTE FOR PARIS GREEN.

Reading your excellent paper last week, the writer noticed one of Prof. R. C. Kedzie's thoughtful papers. This gives various substitutes for Paris green, which is said to be very expensive to the farmer, just at the period when needed most.

Professor Kedzie's opinion and research are both to be much respected. And now I am going to venture to ask that gentleman if he ever tried borax as a germicide. I am anxious to know, because some friends, farmers residing near Toledo, used it on cucumber vines, and even on potatoes, with very good success. As all know, borax is a fine and harmless germicide and antiseptic, and a progressive farmer told me he is anxious to see it given a fair trial by other farmers, as his experience with it, in various instances, has been highly satisfactory. A rose bush, for instance, the buds of which were eaten by vermin, and which could not develop, was not only saved by powdered borax, but was made a regal blossoming thing of beauty. This man is an enthusiast on the borax question for farmers, and says he keeps his henhouse pure and sweet with it, cleanses drains and stalls with it, uses it almost by the bushel, because, though it once was high in price, it now is very cheap, and so fine a disinfectant, cleanser, germicide, and so unobjectionable in case of careless handling, that its use must become widespread. Yours cordially,

NEIGHBOR JONES.

For the Michigan Farmer.

A STUDY IN WEEDS

The best way to study weeds, is to pull them up out of your garden every day. They are by far your worst enemy, and only to be conquered by patient, daily efforts. Like every other work, system is everything. I find the best way is to divide the garden into six portions and confine your attention to one, from Monday until Saturday; even fifteen minutes' work, daily, will do wonders. A piece of thick carpet to sit upon, a good trowel or scratcher helps, and for the dandelions and other long-rooted gentry, a weeder can be bought that does the work very quickly; it consists of a sharp knife fastened to a long handle, and it really is enjoyable to yank these pests out of the ground. Especially is it a disgrace to allow weeds in the rose bed, and it is favorable ground for them, the soil being so rich. In spite of our efforts to get rid of them, some of our weeds are very pretty. The little brown sorrel, for instance, with its bright yellow

flower, causes a smile of pleasure, but if you meekly let just a small bit remain, it increases very fast and the ground is soon covered with its tough, hard to get up, roots. Dandelions will come up and come up, with their winged seeds flying all over the garden and you must give them no quarter. A thistle is another hard customer, but if one is allowed to grow up to full proportions, it a grand looking plant, and the flower beautiful. Only, that one plant will turn into a dozen next season. One fall I took up a small thistle, potted it and placed on my conservatory shelves, among the geraniums and begonias. In its aristocratic neighborhood, many did not recognize it and asked its name and if I would give slips from that pretty plant. Weeding is a good way to observe the Golden Rule of doing unto others as you would be done by. Many a time have I toiled early and late to pull up the weeds, only to see an army of the flying seeds sailing over the fence from my neighbor's garden. If everyone kept his own yard clear, it would be easier all around. To be a conscientious, daily worker to clear out these pests has its rewards. The plants do better. The beautiful brown earth around them makes them show off to good advantage, and the work in the open air makes you a healthy and happier woman.

ANNA LYMAN.

For the Michigan Farmer.

FRUIT NOTES.

As the season for planting orchards approaches, we are beginning to ask ourselves how far apart is it best to set the trees and what plan of arrangement is the most suitable. With anything of such a permanent nature as an apple orchard, these questions are of no small importance, and yet an examination of the grounds set to trees shows that neither of them are considered as much as they should be.

Trees are set too near together. Twenty feet looks like an ample distance when the young apple whips are put into the ground, but somehow they lessen the distance wonderfully in five or six years. Then it is found that two rods are close enough, and when they come to maturity they will encroach upon each other even at that distance. Forty feet is a lonesome distance at first, but we have come to the conclusion that it is close enough for the longer lived trees. An orchardist who has given the matter careful study claims that for an old orchard he preferred a distance of sixty feet. This may be going to an extreme, but certainly the solitary apple trees that one occasionally finds are good arguments in his behalf. Give one of these hardy trees plenty of room, and it will spread out its branches to rival an oak, yielding fruit enough for half a dozen of the same kind planted in the rows of an orchard. But such a growth takes years to accomplish, and though it might be the most profitable in the course of a lifetime, yet it would require too long, with too many uncertainties to make that kind of orchard planting popular.

Peach trees we often find planted ten or twelve feet apart, but we find that when a man sets his second orchard he is quite apt to make the distance twenty feet instead of closer. One large grower recommends thirty feet for the third orchard, but we believe he has not set it yet. Twenty feet does seem rather close when the trees make a rank growth, but that depends much upon the variety.

In the arrangement of the trees it seems hard for people to give up the old square, though the triangular form has some points in its favor. Supposing the trees to be the same distance apart,

SQUARE. TRIANGLE.

then if circles be described about the trees so as to touch each other, there will be a larger amount of ground outside these circles in the center of the square than in the triangle. This may look like a small matter, yet a field that will contain fifty-three trees when in squares will accommodate sixty-four in triangles. In a large orchard this gain would be of no small importance. Setting a tree in the center of the square as is sometimes done would be of no advantage. It would merely make the trees row diagonally across the field. Provided they were kept the same distance apart as in the triangle there could be no gain. In the latter form the trees stand equally distant in three rows instead of two, which would be of some advantage in cultivation. Yet we like to look down the green avenues formed by trees in squares, though they are somewhat prodigal of space.

The orchard fruits have their soils and locations more or less clearly defined. The plum will flourish in the ravines and bottom lands that would be worthless for the peach, the pear is at home on heavy, black clay, while the apple and peach choose the hills and high lands where drainage, both of the soil and the air, are provided by nature. But occasionally they are found where they are hardly to be expected. We have seen single trees and even small orchards of the Barnard peach on level, gravelly lands where other varieties were hardly worth planting, and it did fairly well. The same may be said of an occasional pear and

plum. But the most remarkable instance of the kind was a small peach orchard on a sandy knoll that arose half a dozen feet above the alluvial soil of the St. Clair flats, three or four miles back from the lake. Here was a natural variety which seemed to be fitted to its place, but we doubt if any of the kinds known to the nurseries would amount to anything there. The original tree was from a stone planted by one of the pioneers, and from this the orchard had come. For more than fifty years the trees had occupied the ground. When they died down sprouts sprang from the old root and renewed the orchard, which was sufficient proof of the hardiness of the trees. Strangely enough the fruit was above the medium in size, yellow, firm, and excellent in flavor, in fact superior to the majority of cultivated varieties. This is an example of what may sometimes be found among the much neglected seedlings. Yet how few think of developing some natural fruit known to be fitted for their locality instead of buying nursery stock that may be nearly certain to fail.

One question which many people ask and none, so far as we have heard, can answer is how to keep winter pears. They may keep well enough so long as they remain in cold storage, but when taken out they soon spoil, so quickly that they cannot be placed upon the market. The winter pear is not yet what it should be, although varieties are getting numerous. Undoubtedly we shall have it in time, but at present its field of usefulness is limited. The man who develops a fruit that can be handled in the winter as well as the apple, will deserve to rank with the originator of the Concord grape. Till that time comes, consumers must content themselves with the pear in its season, but we hope it will not be for long.

The German prune is grown extensively on the Pacific coast, but is not often seen in Michigan, though some varieties are adapted to our climate. One cause of this neglect has been the poor stock sent out by many of the nurseries. If the plums and cherries die people will set out again, but when it is a tree with a foreign name, about which they do not feel certain, which fails to grow they are not apt to try a second time. Those who raise it find it excellent as a fresh fruit, without drying, and it is easy to grow.

"We have tried sweet apples and don't like them," says the *Farm Journal*. "Of course they are best for stock, but nobody wants them in the market. Nine out of ten apple eaters prefer tart ones." Perhaps nine out of ten people prefer a tart apple, but sweet fruit has its mission, too. Because only a small number of consumers ask for it is no reason why there should not be a good sale for it, so long as the supply is limited, and the number of sweet apple trees set is certainly a very small proportion of the orchard area. One extensive orchardist and shipper has frequently told us that he would rather have sweet apples of a good variety than any others. There is always, he says, a demand for a good sweet apple, and a serious mistake of fruit men is to neglect it. But only superior fruit is wanted. As this is the experience of a man who has had several years to form his opinion, it should be worth considering by those who are planting apple orchards.

"The Cuthbert will be discarded as soon as the London becomes known," say some of the raspberry men. Perhaps it will. The Cuthbert is by no means perfect, but we must have better assurance than we have yet been given that the London can adapt itself to as varied conditions of soil, climate and cultivation. As yet it has not been long enough before the public to be a certainty.

F. D. W.



We wish to direct attention at this time to the firm of H. W. Buckbee, Rockford Seed Farms, Rockford, Ill., who for more than 25 years has been supplying the public with good, pure, sure germinating seeds of every variety for the farm and vegetable or flower garden. It is an undeniable fact that the fertile prairie soils of the West produce a seed that for vitality and germinating power is the equal if not the superior of anything grown elsewhere in this country. That is practically true of the Buckbee's New Golden Lima bean, a cut of which we present herewith. It is a true pole lima, which is the only variety that can be grown true to type or with any degree of certainty as to results. It is said to be fine in quality, a sure yielder and a prolific bearer. Send for a free copy of Buckbee's seed and plant guide, which contains an unusual number of things of value.

A Profitable Industry.

The potato industry is increasing every year. This is a profitable crop, but in order to get the utmost profit a potato planter is needed. Don't try to get along without one, for it is a money maker and labor saver.

Ask the Aspinwall Mfg. Co., Jackson, Mich., for a catalogue. This concern makes the Aspinwall Potato Planter, a simple, solid, successful machine, sold at a remarkably low price.

When writing to advertisers please mention that you saw their advertisement in the MICHIGAN FARMER.

Good News for Asthma Sufferers.

We are glad to announce that the Kola Plant recently discovered on the Congo River, West Africa, has proved itself a sure cure for Asthma, as claimed at the time. We have the testimony of ministers of the gospel, doctors, business men and farmers, all speaking of this new discovery. Hon. L. G. Clute, of Greeley, Iowa, writes that he could not lie down night or day from Asthma, and the Kola Plant cured him at once. Rev. G. Ellsworth Stump, pastor of the Congregational Church at Newell, Iowa, was cured by it of Asthma of twenty years' standing, and many others give similar testimony. To prove to you beyond doubt its wonderful curative power, the Kola Importing Co., No. 1164 Broadway, New York, will send a large case of the Kola Compound free by mail to every reader of the MICHIGAN FARMER who suffers from any form of Asthma. In return they ask that you tell your neighbors of it when cured yourself. This is very fair, and we advise all sufferers from Asthma to send for the Case. It costs you nothing.



Maule's Up-to-date Collection of

Sweet Peas

8 New Sweet Peas for 20 Cts.

Every lover of flowers should grow Sweet Peas. No flower garden in the land is complete without them. Handsome in modest loveliness, most graceful in arrangement, unequalled perfume, exquisite coloring, abundance of bloom, unexcelled for cutting, succeeding everywhere with everybody.

Butterfly. White, suffused lavender.
Duchess of York. White, suffused purple.
Firefly. Brilliant carmine; best self-color.
Emily Henderson. The best pure white.
Mrs. Chamberlain. White, striped rose.
Meteor. Salmon, wings delicate pink.
Lemon Queen. Blush, tinted lemon.
Novelty. Bright orange rose, wings mauve.
One full-sized packet of each of these eight superb New Sweet Peas sent postpaid to any address for

ONLY 20 CENTS.

FREE. With every remittance of 20 cents for the above collection, I will include absolutely free, if you mention this paper, one packet of the New Dwarf Sweet Pea "Cupid," which only grows 5 inches high, with pure white flowers, together with my Catalogue for 1897, the seed book of the year. It is free to all accepting this offer. It contains everything good, old or new, in Vegetable, Field or Flower Seeds, Flowering Plants, Bulbs, etc., beautifully illustrated; over 400 illustrations. You need it, no matter if you purchase 10 cents or \$10.00 worth of Seeds or Plants. Address

WM. HENRY MAULE,

1711 Filbert St., Philadelphia, Pa.

The name of the greatest oat is

"ILLINOIS"

yields over 100 bushels per acre, extremely early, finest quality, longest and strongest straw.

OATS

Send your name and address on a postal card and I will send you a sample, together with beautiful and instructive seed and plant book free, if you write to-day and mention this paper.

H. W. BUCKBEE
ROCKFORD SEED FARMS,
Rockford, Ill.
P.O. Box 547

THE HIGHEST GRADE GRASS SEEDS

IN THE WORLD TO-DAY

ARE SUPPLIED BY

Peter Henderson & Co.

GRASS SEED FOR HAY,
GRASS SEED FOR PASTURE,
GRASS SEED FOR LIGHT SOILS,
GRASS SEED FOR HEAVY SOILS,

AND
"HENDERSON" GRASS SEED FOR LAWNS

Our AMERICAN FARMERS' MANUAL for 1897, 32 pages, devoted entirely to Seeds for the Farm, mailed free on application. Correspondence invited.

PETER HENDERSON & CO.
35 & 37 Cortlandt St., NEW YORK.

Apiarian.

For the Michigan Farmer.

QUESTIONS ANSWERED.

I am just in receipt of a letter from La-peer county that is so fair an example of the letters I receive that I will give it in full and then endeavor to answer the questions, hoping others may be benefited:

ALBA, Mich., Jan. 23d, 1897.

Mr. Hilton.

DEAR SIR:—There are so many questions I want to ask you I hardly know where to begin.

Now don't say that sounds just like a woman, and not read farther, for like yourself I keep bees. And as my husband takes the MICHIGAN FARMER I read a good many of your articles on bee-keeping, and have thought I would write you before this, and then I would think, No; perhaps I can learn for myself.

Two years ago we moved from Ann Arbor, and that season my bees didn't do very well. I thought perhaps it was because they had been moved, but last year they didn't do anything at all, while I read of yours doing so nicely. Now I have double-walled hives and try to do everything I know or learn for their comfort.

The last year has almost discouraged me. In the first place I have only ten stands, and as we only rent, I didn't want to increase, so when they would swarm I would take out the queen and make them go back to the old stand, and it seemed as if all they wanted to do was to swarm. And then the drones! It seemed as though every other bee was a drone. So after reading your article of January 23d, I just thought, now, Mr. Hilton, I don't know enough to keep out the drones, and would like to hear from you in regard to that, and why they swarmed so much, and how I can keep them from swarming.

What time in the spring shall I unpack them? I have usually unpacked them as soon as they began to work good, putting on supers after the first swarm. How can I go through them, cutting out the queen cells and not hurt their working or starting them to robbing? I have been told I could; or would you advise me to do as I did last year? My bees are Italians, or that is what they are claimed to be. I doubt if this will reach you as you do not mention your town.

Yours Respectfully, M. M.

First, the moving of your bees did not hurt them provided they were well ventilated during their trip; this should be done by making a wooden rim the size of the brood nest and covered with wire cloth the same as you use for your windows and doors. Moving them to new fields usually incites them to greater activity. Second, the reasons why your bees did not do as well as mine are numerous: first, your location is not as good as mine, second, your bees are not in proper condition, and did not receive the proper attention at the proper time. Now if you have a properly constructed chaff or double-walled hive there is no unpacking to be done except to remove the chaff cushions at the opening of the honey flow and put on a super of sections, and frequently I put the chaff cushion on top of the super to retain all the heat possible, and to induce the bees to enter the super early and get them interested in storing surplus instead of swarming.

You say you don't want increase, and in the same breath say you don't put the super on until after the first swarm issues; you could not do a better thing to induce swarming than this, or make it more impossible to store surplus.

To get a good crop of honey you must have a hive teeming full of worker bees with few drones and little or no desire for swarming. In my Woodville yard last spring there were just 100 colonies and to-day there are 130, less than one-third of them swarming you see, and we took 7,200 pounds of the finest comb honey from this yard I ever saw. How did we do it?

Well in the first place we have blossoms that secrete nectar, second, our bees are all hived on full sheets of foundation in wired frames. That practically includes the rearing of drones. Our first supers are put on as soon as the colonies have been equalized and all built up to as uniform strength as possible, and as soon as the first is half or two-thirds filled with honey, the first is raised up and another (all sections filled with full sheets of foundation) is placed under it, thus discouraging swarming as long as possible. If these two supers should become nearly full and not capped over ready for removal, then we would raise the two up and put a third one under, and as one of my men puts it, "We keep pounding them on the back for all the honey there is in them." But in spite of us, some of them will swarm. My orders are, as soon as a swarm issues, lift off the supers; if the hive contains queen cells that are not capped over it is a prime swarm, and the frames are all lifted out and placed in an empty hive; the old hive is refilled with new frames wired and filled with full sheets of foundation, the supers are put back where they were, the swarm is put back into the same hive they came out of and we have the same working force we had before they swarmed, as all the bees at the alighting place will return to the parent hive as soon as they miss the queen, as will all other bees that are old enough to go to the fields.

But supposing we find hatching queen cells and no eggs or young larvae in the hive; then we have a case of superseding the old queen and the mode of procedure

is very different. We take out every frame, shake the bees down upon the alighting board and be sure that we destroy every queen cell. The frames are then returned to the hive, the supers replaced and the swarm returned; they having no means of raising more queens and only a "virgin queen" with them will not swarm but will go on with the storage of honey. In this way you see we save only prime swarms, and instead of dividing the working force as you do we keep it all together and discourage swarming, while your plan encourages swarming and divides the working force, making it practically impossible to store surplus, because they are not strong enough. Now your third question "how can I keep them from swarming" is practically answered from my standpoint; others may have better plans.

I have never seen your hives or bees, but I will venture the guess that they have been hived on empty frames, or frames with small starters. The bees have practically been allowed to build their own combs, and the result is they have built about half drone comb. This debars the queen from laying as many worker eggs as she would were it all, or nearly all, worker comb. To keep her brood nest compact she fills this drone comb with eggs and the result is a horde of consumers and only half enough producers. This places the colony in an abnormal condition, and you have swarm after swarm about half workers and half drones. If they were my bees I would get a new set of brood frames, and when the apple trees bloom next spring I would cut out every comb, transfer all the worker comb to my new frames, and render the balance into wax, filling up the rest of the hive with frames filled with full sheets of foundation. Then follow the plan I have outlined above, and if there is any honey in the fields next season you will get your share and have less trouble with swarming.

In regard to going through and cutting out queen cells, it can be done at any time there are cells to cut, but I know of no better time than when they throw out a swarm and it proves to be a case of superseding. But suppose you had gone through this hive a day or two before they swarmed and had removed all the cells, then the colony would have been destroyed, as they would have no means of raising a queen. So I deem the promiscuous cutting of queen cells, in the hands of a novice, a dangerous experiment.

It seems to me I have been all over this ground, through the FARMER, and it seems like repetition, but I am glad to do it if it will do any good and the editor feels disposed to publish the same. But don't be afraid to ask questions. I will either answer by letter or through the columns of this paper, and if I don't make it plain the first time, write again. GEO. E. HILTON. NEWAYGO CO.

When writing to advertisers mention MICH. FARMER.

Hood's Pills

Cure sick headache, bad taste in the mouth, coated tongue, gas in the stomach, distress and indigestion. Do not weaken, but have tonic effect. 25 cents. The only Pills to take with Hood's Sarsaparilla.

BARGAINS IN SEEDS

12 full pkts. only 20c. Send stamps or coin. We will mail one of these collections: A. 12 pkts. Vegetable Beans, Beans, Cabbage, Corn, Lettuce, W. Melon, M. Melon, Onion, Peas, Radish, Squash, Tomato. B. 12 pkts. Flower Seeds, including Japanese Morning glory variety. Extra packet free with orders mentioning paper. W. W. BARNARD & CO., 186 E. Kinzie Street, Chicago.

DANISH BALLHEAD CABBAGE.

Imported Reliable Seed. Prices on application. Catalogue Free. FRANK H. BATTLES, Seed Grower, Rochester, N. Y.

CLOVER AND TIMOTHY SEED.—Home grown, bushel or car load. Medium and Mammoth clover, true to name. Samples and special prices on application. ADOLPHUS WYSONG, Lebanon, Ind.

CARMAN No. 3 \$2.50 SEED POTATOES. Early Harvest, Carman No. 1, Sir William, \$2.50 bbl. Rutland Rose, Early Northern, Adirondack, \$2.35 bbl. All the new and choice variety. Extra packet free. Send for Catalogue. NORTHEAST SEED CO., ROCHESTER, N. Y.

BERRY PLANTS of all kinds at right prices. Catalogue G, with remarks on Berry Growing free. R. J. STAHLEIN, Bridgman, Mich.

BERRY PLANTS by the million. Low prices. Best plants. "How to Succeed with Berries," and Catalogue FREE. Write now. I. A. WOOLLE, Elsie, Mich.

TREES At Very Low Prices. Send now for Free Catalogue. Established 1863. 150 ACRES. THE GEO. A. SWEET NURSERY CO., Box 1372, DANVILLE, N. Y.

FIELD SEEDS. Clover, Timothy, Hungarian, Millet and all other seeds for the farm. If your dealer does not handle our seeds write to us for prices. Twenty-five years successful experience. JOHNSON & SON, Coshen, Ind.

"Strawberry Plants That Grow."

Standard sorts, \$1.50 to \$2.50 per M. Best Rasp. and Blackberry plants, \$3.50 to \$5.00 per M. My "1897" catalogue mailed free. C. E. WHITTEN'S NURSERY, Bridgman, Mich.

CHESTNUT, 12 CURRANT, 12 GOOSE-BERRY, 12 GRAPEVINE \$3. prepaid. T. G. ASHMEAD NURSERY, Williamson, N. Y.



Iowa Silver Mine Corn

Yielded in 1896 on a Farm 215 BUSHELS PER ACRE!

The largest and most wonderful crop ever grown. It is a grand new variety, the best and most productive corn in the world. Ears large, kernels deep, small cob, matures in 95 to 100 days. Yielded in Arkansas 188 bushels; in Neb. 155 bu.; in Ohio, 135 bu.; in Texas 128 bu.; in Mich. 97 bu. Average corn crop of the U. S. is only 28 bu. Just think of it! Our prize acre was equal to seven acres of ordinary corn. See proof of above in our catalogue. There is money in farming if you only know how. Don't be a Snail! Be progressive. Adopt new methods. Use good seed. Instructions for growing 200 bushels corn per acre sent to all who order Iowa Silver Mine Seed Corn from us. It will pay you to plant your entire corn field with this variety. Seed costs only 30 cts. per acre. You can pay off your mortgage and it will be equal to a silver mine on the farm. Get your neighbors to order with you. We refer to editor of this paper as to our responsibility. Price—Per peck 75c, bush. \$2.00, 2 bush. or more @ \$1.85, 10 bush. \$17.50.

\$500.00 IN PRIZES offered for largest yield in 1897. Competition open to all. Somebody's going to get it. Is it you? Send for particulars and our large illustrated catalogue of best novelties and standard sorts of Farm, Garden and Flower Seeds. Also Special Bargain List mailed free if you mention this paper.

IOWA SEED CO. (Established 1871), Des Moines, Iowa.

One-half Saved

Fruit crates and baskets.

STAR STRAWBERRY

LORENTZ PEACH

on TREES—fruit, ornamental—SMALL FRUITS, ROSES, VINES, SHRUBS, by buying of REID. Reid's stock will respond to every need of every class of fruit growers. Small lots at small prices, big lots at big reductions. Best standard sorts, choicest novelties. Fully illustrated catalog free. Estimates upon large quantities given if requested. REID'S NURSERIES, BRIDGEPORT, OHIO.

SALZER'S GIANT FLAT DUTCH.



SALZER'S NORTHERN-GROWN SEEDS

Produce the finest vegetables and choicest flowers wherever planted—North, East, South, West. We wish to gain 100,000 new customers this year; with this in view we offer \$1.00 for 14 cents, postpaid, 10 NOVELTIES FOR 14c.—WORTH \$1.00. 1 pkg. Bismarck Cucumber, 15c.; 1 pkg. Red Ball Beet, 10c.; 1 pkg. Earliest Muskmelon, 10c.; 1 pkg. Earliest Carrot, 10c.; 1 pkg. Emp. Wilhelm Lettuce, 15c.; 1 pkg. Giant Onion, 10c.; 1 pkg. 14 Day Radish, 10c.; 1 pkg. Brilliant Flowers, 15c.—total \$1.00—sufficient for rare vegetables and exquisite flowers all summer long! Mammoth farm, vegetable and plant catalogue, 5 cents postage, or mailed free to intending buyers.

JOHN A. SALZER SEED CO., La Crosse, Wisconsin.

Before buying Seeds you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about THE BEST SEEDS that Grow! Hundreds of illustrations with remarkable NEW Novelties, painted from nature. "The Leading American Seed Catalogue." Mailed FREE to all. W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

CAMPBELL'S EARLY GRAPE

Best and most valuable. Highest commendation from highest authorities. Hardy, healthy, vigorous, very productive. Early or late. Largest clusters, finest quality, not foxy. Seeds need not be swallowed. None genuine without our seals. We guarantee safe arrival by mail. Largest stock of Grape Vines in the World. Small Fruits. Introducer of unrivalled Red Jacket Gooseberry and Fay Currant. Catalogue free. GEO. S. JOSSELYN, Fredonia, New York.

Peach Trees, Peach Trees, Peach Trees, Peach Trees.

WE HAVE TO OFFER

Elbertas, Early and Late Crawford's Smock, Hill's Chill, Crosby, Snow's Orange, Yellow St. John, Golden Drop, Early Michigan, Salway, and other best varieties.

Send us your list for prices. Illustrated Catalogue sent free to any address.

THE MICHIGAN NURSERY CO., Monroe, Mich.

BIG BERRIES

His book "HOW BIG BERRIES AND LOTS OF THEM ARE GROWN" and new price list Free. THAYER FRUIT FARMS, SPARTA, WISCONSIN.

FERRY'S SEEDS

There has never been a time when growers should guard against failure with more care. There has never been a time when Ferry's Seeds were more essential. They are always the best. For sale by leading dealers everywhere. Insist on having them.

FERRY'S SEED ANNUAL

is full of information for gardeners and planters. There will never be a better time than now to send for the 1897 edition. Free. D. M. Ferry & Co., Detroit, Mich.

SEEDS

CATALOGUE FREE. Standard AND Best New

Why you should send for our FINE FREE Catalogue because OUR SEEDS are the best. Prices lowest. 5c pkts. for 2c. Lots of Extras Free. For Market Gardeners ask for Wholesale Price List. ALNEER BROS., No. 14 Alneer Bldg., Rockford, Ill.

STRAWBERRY PLANTS. All leading varieties, \$2 per thousand. All kinds small fruit plants cheap. DRESSER'S FRUIT FARM, Jonesville, Mich.

1,000 Peach Trees

One year from bud. 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$20; or 500 for \$11.50. Sample prepaid, 25c. Other sized trees proportional prices. B. S. JOHNSTON, Box 6, Stockley, Del.



BEST IN THE WORLD FREE PRETTIEST BOOK EVER PRINTED. SEEDS CHEAP. Only 1c to 4c per pkg. Cheap by oz. & lb. Send Yours, and Neighbors address for Grand Catalogue. R. H. Shumway, Rockford, Ill.

OCEAN CITY Strawberry. Finest flavor; large and solid. Bear enormously. Donald's Elms, Asparagus Root, a new production of rare merit. Greensboro Peach, Japan Plums, Small Fruits, Tenn. Peach Seed. Catalogue FREE. HARRISON'S NURSERIES, BELTIN, MD.

FRUIT TREES.

NOTICE TO PLANTERS. We have a large stock of our own growth, of Apples, Pears, Plums, Cherries, Peaches, small fruits, etc., etc. By ordering direct from us you will save 50 per cent. All trees guaranteed true to name. 40 years in the business. Write us and save money by doing so. L. G. BRAGG & CO., Kalamazoo, Mich.

CHOICE Seed Potatoes, 50 varieties, in bu. or car lots; 4 new varieties of corn and oats that make large yields. A present for every M. F. reader. Prices low Catalogue free. C. C. BRAWLEY, New Madison, Ohio.

Grange Department.

OUR MOTTO:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to
KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - - MICH.

News from Michigan Granges is especially solicited.

OFFICERS MICHIGAN STATE GRANGE.

Master—George B. Horton, Fruit Ridge.
Overseer—E. B. Ward, Charlevoix.
Lecturer—Jason Woodman, Paw Paw.
Steward—Geo. L. Carlisle, Kalkaska.
Assistant Steward—Wm. Robertson, Hesperia.
Chaplain—Mrs. Mary A. Mayo, Battle Creek.
Treasurer—E. A. Strong, Vicksburg.
Secretary—Miss Jennie Buell, Ann Arbor.
Gatekeeper—M. H. Foster, Kent.
Pomona—Mrs. Estella E. Buell, Union City.
Flora—Miss Ritzpah Norris, Lansing.
Ceres—Mrs. Estella Knight, Swartz Creek.
Lady Assistant Steward—Mrs. Mary Robertson, Hesperia.

EXECUTIVE COMMITTEE.

W. E. Wright, Coldwater; Chairman; H. D. Platt, Ypsilanti, A. E. Palmer, Kalkaska; Thos. Mars, Berrien Center; R. K. Divine, Holly; E. A. Holden, Lansing; F. W. Redfern, Maple Rapids.

OFFICERS OF NATIONAL GRANGE.

Master—J. H. Brigham, Delta, O.
Overseer—Aaron Jones, South Bend, Ind.
Lecturer—Alpha Messer, Vermont.
Steward—J. L. Cox, Readington, N. J.
Asst. Steward—A. J. Newcomb, Golden, Colorado.
Chaplain—O. N. Hale, No. Stockholm, N. Y.
Treasurer—Mrs. F. E. McDowell, Columbus, O.
Secretary—Jno. Trimble, 514 F. St., Washington, D. C.
Gatekeeper—W. E. Harbaugh, Missouri.
Ceres—Mrs. Lucy G. Smith, Delaware, O.
Pomona—Mrs. Sarah G. Baird, Edina Mills, Minn.
Flora—Mrs. L. E. A. Wiggins, Maysville, Me.
Lady Asst. Steward—Mrs. S. G. Knott, Moler, W. Va.

EXECUTIVE COMMITTEE.

Leonard Rhone, Centre Hall, Pa., Chairman.
J. J. Woodman, Paw Paw, Michigan, Secretary.
N. J. Baeholder, East Andover, N. H.
J. H. Brigham, Ohio, Ex-Officio.

TAX STATISTICS.

The subject of taxation in its broadest sense is perhaps the most important and far-reaching of any public question. In any event it is the public question of most immediate interest to the people. Probably no tax system will ever be devised that will satisfy everybody. Doubtless there are multitudes of people who would be very glad if they had to pay no taxes at all. At the same time, every one admits that our present system in Michigan is not satisfactory. And there is a general feeling, both among taxpayers, who find it hard work to secure enough money to pay their taxes, and among students of the situation, that there are many inadequate provisions and unjust burdens in our system.

As a result of this feeling every legislature does more or less tax tinkering. Four years ago, we believe it was, there was a law passed which was supposed to be a great improvement over the existing laws. It was carefully scanned, in the Senate at least, and was the result of the close work of men who thought they were tax experts, but it apparently did not solve the problem; so far as we know there has been little change for the better, and in fact complaints are deeper than ever. This fact in itself shows the absolute necessity of the most thorough study and searching investigation before we attempt to pass a thorough-going tax law. The subject is so broad, the interests involved are so complex, the workings of the law are so involved, that no one man can solve the problem; nor can any set of men, until somebody has given much study and thought, not only to the details of taxation, but to the theories involved. The Grange is in hearty sympathy with this idea, and two years ago favored the law providing for a State tax statistician. There were many farmers who thought that such a move was of no advantage, but such people do not think deeply enough. It must be understood thoroughly that this subject of taxation is not a question for a day to settle or for one legislature; it will take some years of study, investigation and agitation before we can even hope to solve the problem with any degree of satisfaction. We must have the facts before we attempt to secure any adequate legislation.

The work of the present tax statistician has been pursued under some difficulties, but in the main has been satisfactory. His work is in the right direction, and it is no time to say that the office should be abolished; we need more light; blind legislation is a curse and we have too much of it.

There is one thought, however, that can be added here. Our belief is that the work of the tax statistician would be of vastly more weight if the plan were somewhat changed. We would have a tax commission, serving without pay, made up of men representing various large interests, such

as agriculture, manufacturing, railroads, etc. There should also be on the commission a student of political economy. The actual work of the commission would be done by the tax statistician, but his work would be reviewed by the commission. The point is here: What one man says, no matter how able he is, is apt to be taken with a grain of allowance by a great many people, but the facts that the statistician would obtain, when supported by representative men, would carry weight. We are glad to publish in this issue a letter from Hon. Leonard Rhone, Master of the Pennsylvania State Grange, which shows the methods pursued in Pennsylvania to obtain the same ends which we are working for in Michigan. The Grange has succeeded there in bringing about a vastly improved condition of affairs in taxation. Why can't we do the same in Michigan? Only let us be sure that we know what we are doing.

GRANGE NEWS.

OF the eight Grange letters to the FARMER of Feb. 20th, four were from Lenawee county.

GRANGE officers should be prompt in acting upon all legislative petitions as suggested by the State Grange.

It is suggested that the local and general deputies should be heard from occasionally in this department. All their successes should be given out to encourage others. Who first?

A NEW Grange with strong charter list was organized on the evening of the 15th ult. at South Dover, Lenawee county. This makes an even twenty for the banner Grange county of Michigan.

EVERY subordinate Grange in the State has among its list of members a person who would, if appointed to report the leading features of Grange meetings to the Grange department in the FARMER, do much to inspire others and at the same time greatly benefit themselves by such practice. The master has the appointing power and should exercise it at once.

ENSLEY CENTER GRANGE No. 544 met Saturday, Feb. 19th. The attendance was not as large as usual, but the meeting was very interesting. Had some very good talks on marketing produce which brought out some rather warm discussions. This is how the Grange benefits the farmer—educating him in a literary way as well as teaching him how to grow and take care of what he produces.—W. S. K.

MORENCI GRANGE No. 280.—Bro. B. G. Hoig was elected delegate to the second annual round-up farmers' institute at St. Louis, March 2 to 5. Sister Sweet read a paper on the "Principle objects of the Grange." Sister Colegrove also read a paper, "Agriculture in the common schools." The subject for discussion, "The benefits of co-operation in the Grange," opened by Bro. Hoig, followed by Bro. Boody and others.—B. M. C.

SYLVAN GRANGE is in a flourishing condition. Four candidates were instructed in the first two degrees, and two new applications received at last meeting. Quite a number of our members drove to Hesperia last Friday to attend the Grange and Teachers' meeting in progress there. The farmers here are much interested in the subject of the manufacture of beet sugar. The question was discussed at the last meeting of our Grange.—JESSIE HESSELSWEET, Cor. Sec.

IONIA COUNTY POMONA GRANGE will meet with Banner Grange, Thursday, March 18, Banner Grange entertaining. The forenoon session will be given to the general work of the Order. All fourth degree members are invited; evening session, fifth degree conferred. The afternoon session will be opened by music, Banner Grange choir, with a literary program. Resolutions, suggestions, for good of the Order, questions for debate, and the Sisters' Minute Club, all in order. All bring in your paper, remembering the question, "What would you do in the case of emergency?" Choose your emergencies.—A. R. B., Lecturer.

IRONTON GRANGE, No. 707, was organized about three years ago by Bro. E. B. Ward, but owing to the hard times and other organizations, we have moved slowly until just lately. January 14th, Bro. A. E. Palmer addressed the people on Grange work, and February 19th we initiated eight new members and have more names to ballot on at our next meeting. February 20th Bro. E. B. Ward organized a Pomona Grange here with over fifty members, and I think that in another year we can send you a good report from Ironton Grange. We have a good hall, and I see no reason why we should not have at least fifty members.—O. H. HAMMOND, W. M.

CALHOUN CO. GRANGE will meet at the residence of Mr. and Mrs. Abram Minges, on Thursday, March 11, 1897. Entertainment by Battle Creek Grange. Program: 1. Bible quotations relating to farm life, by each member. 2. A study of woman's work and wages, Miss Lillian Adams; comments by Kate Woodworth and Frank Minges. 3. Is this section of Michigan well adapted to dairying? How do we compare in this industry with adjoining states? Is it a profitable branch of farming? S. E. Woodworth, C. P. Childester, G. C. Hicks, Mrs. Childester, Mrs. John Woodworth. 4. Essay or selection, Mrs. E. H. Hicks. 5. What

the farmers think of setting state prisoners at farming, E. M. Brown, A. L. Mead, Mrs. C. C. Poorman. 6. Reports from Albion institute, by all members attending. C. C. McDERMID, LECTURER.

ALLEGAN CENTRAL GRANGE.—As we come under the head of live Granges, perhaps something in the way of what we are doing would be interesting. We commenced the year with about sixty members, and with ladies filling the chairs of Master, Overseer and Lecturer. Every alternate meeting is literary, and our Lecturer is infusing new life into the Grange by her very interesting programs. The night of February 22d. we held a Washington social, the program relating wholly to Washington and the affairs in which he figured. We also served cake and coffee and invited all our friends. Through the winter we have met at half past ten and closed at three, devoting the noon hour to our lunch and a social time generally. I feel that the great trouble with many of the dormant Granges is the lack of cultivating the social side. We have a commodious and comfortable hall, and many a brother and sister dates their mental growth from the time they joined the Grange.—M. L. V.

WHITNEYVILLE GRANGE, KENT CO.—We hold our own, gaining as many as we lose. Our hall is 26x50, two stories, upper story for Grange, lower story for dining-room, kitchen, and grocery. We buy our groceries at wholesale and all package goods sell at cost; those in bulk have a slight margin added to make up for shrinkage. We sell to members only, the store being open Saturday evenings. A member saves enough on his groceries in two weeks to pay his dues for the year. We also have a library of 125 volumes of history, travel, and fiction; also have one of the traveling libraries from the State. Every Grange that has a library ought to get one of these latter, as it only costs five dollars a year and you can change every three months. We are opposed to any change in the present road laws. Every farmer should join the Grange so he can help fight these laws and help push others. The farmers as a general thing are not like mules, for when the latter are attacked they will form a ring with heels out and kick out, but farmers will get their heels in and kick one another.—A. T. D.

IONIA POMONA GRANGE held its meeting of Feb. 18th., with Ronald Grange, with an attendance numbering toward the hundreds, seventy-four being seated at the first tables. Our Worthy Master H. J. Hall being unavoidably absent, Overseer George Wooster occupied the chair. Reports were of much interest, and showed Grange to be in excellent working order, several new names being added to the list.

Topic for discussion, "What benefit did you derive from the farmers' institute?" It was discussed until dinner, and after dinner was taken up again. The institute had been a benefit to some and of no benefit to others, the former gaining their point. The reports of several Granges were favorable. Jan. 1 Ronald Grange had over one hundred members. They have a large class of young people, that is a credit to the Order, and a good choir.

The county lecturer reported Pomona in her 21st. year. The Worthy Master thinks we had better celebrate. Pomona has done some work in that time, but it resolved to do better and more of it in the future.

Resolved, By Ionia Pomona that the laws governing cities should be so amended as to deprive all cities of the use of the county jail as a city lock-up.

Resolved, That the circuit court stenographer's salary of this circuit be not raised. We think, with the extra he gets, his compensation much higher than other occupations.—LECTURER.

UNION GRANGE No. 97 is in a good prospering condition. We have a very good attendance and a fine literary program every time we meet. Our worthy lecturer keeps the Grange busy, allows no idling and all are here to respond. We have debates, orations, recitations, music, etc. We observed Feb. 22d. with a social and literary program. Paper, "Washington as a civilian," Miss Ella Kilbourn; oration, "Washington as a politician," George Gan Jr.; oration, "Washington as a military genius and successful general," Thomas Buell; address, "The progress and prosperity of our Republic from Washington to McKinley," Hon. D. D. Buell; select reading, "The dusty Concord road," Miss Lizzie Olmsted; address, "The right of Revolution and the principles our forefathers fought for," Byron Bray; essay, "The heroism of the patriotic mothers of the Revolution and their part in the struggle for liberty," Miss Nellie Strong; recitation, Miss Dupue, teacher Union City high school; recitation, "The twenty-four presidents," Master Freddie Buell; a solo, by little Bessie Kilbourn; recitation, by Starr Bray, six years old. We had a very pleasant surprise of a large picture of George Washington, drawn and presented by George Gan, a young gentleman member of the Grange. It was a masterpiece of fine work.

We bought last year three thousand pounds of twine. It gave good satisfaction; we are in hopes to do better this season. We have not got the largest Grange, but we are convinced there is none better. Our Master was not absent once last year. We have a good hall and everything needed for convenience.—MRS. IRA BUELL, Sec.

KENT COUNTY POMONA GRANGE will hold a two days' session at Harmony Grange hall, just west of Grand Rapids, on Wednesday and Thursday, March 17th and 18th. Harmony Grange has very kindly volunteered to furnish entertainment for this session of Pomona. The first day we expect to have an interesting program, in

which all fourth degree members are asked to participate. The fifth degree will be conferred in the evening on all desiring the same. On Thursday morning will occur the business meeting and at which we desire a full attendance of the members.

Wednesday's program: "To what extent does the prosperity of farmers depend upon legislation?" Bros. Wm. T. Adams, H. C. Hogadone, Will Myers. "What changes are necessary to make a shiftless farmer a thrifty one?" Bros. S. C. Peterson, Scott Duley, A. R. Denise. "What are some of the necessary qualifications for a good housekeeper?" Sisters Wm. T. Adams, Eliza Foster, J. R. Edison. "How much of success in life depends upon little things?" Bros. M. H. Foster, Harmon Burch, Sisters Harmon Burch and Wm. Chambers. "Who is responsible for the success or failure of a Grange?" Bro. & Sister Dennison; Bro. & Sister Wesley Johnson, Sister John Preston. "What is needed to make the farmer's home attractive?" Sisters Gaylord Holt, Adella Peterson, Laura Clemons. "How have the distinct breeds of cattle been established?" Bro. Gaylord Holt. "To what extent should agriculture be taught in our common schools?" Bros. Chester Slayton, Wm. Chambers, Sister Stanton. "Can another Grange be organized in this section, and if so where and when?" Bro. John Preston. "Which is more desirable in life, knowledge or character?" Sister Martha Berry. "Best methods for making dairy butter." Bro. John Berry, Sisters Brass and Wm. Myers. It is expected that Alpine and Harmony Grange choirs will furnish music. Come everybody prepared to join in with recitation, song or discussion and help us make this, our first two days' session, a grand success.—E. R. KEECH, Lect.

THE dedication of Lime Creek Grange hall occurred according to program, on Feb. 24th. The meeting was called to order in the morning by Bro. Taylor, master of the County Grange, and a general business meeting was held. After dinner a public meeting was announced, and the people of Lime Creek Grange, led by Bro. Horton, Master of the State Grange, dedicated the hall to its mission of Grange work, which was followed by a program that had been arranged by Bro. Moore, Lecturer of Lenawee County Grange. Among those on the program were such names as those of R. H. Rogers, the noted farmers' club worker of Medina; Brothers Moore and Van Wey, of Hudson; Mrs. Anna Corser, of Medina; Mrs. Lawrence, of Hudson; Miss Sebring, of Morenci, and Misses Gallup and Moore, of Medina.

Bro. Horton gave an outline of the bills which met the full approval of the Grange, not that others should not be passed, but that each of these had been deliberately selected by the State Grange as of more than ordinary import.

The traveling library, the tax statistician, farmers' institutes and collection of farm statistics by the supervisors are matters started in the right direction, and none of them should be repealed, but the laws we have should be made more efficient. If the collection of farm statistics, for instance, were to be repealed it would be a long time before we could get another and better law, because we had had one repealed. Our present insufficient law should be amended if necessary, and its work improved. The Kimmis bill, the Jibb anti-color bill, and the bill to prevent the appeal to a higher court from a justice's court in any amount under \$50, except where an important principle is involved, were also explained, and the Grange supported each of the seven propositions.

A motion was made asking Bro. Van Wey for his paper for publication in the MICHIGAN FARMER.

Will the secretaries or some member of each Grange in Lenawee county address the undersigned, giving the date of the first meeting in April of their Grange, the hour of meeting, and frequency of occurrence, also the name and postoffice address of master, lecturer and secretary.—E. W. ALLIS, Adrian, Mich.

PENNSYLVANIA TAX REFORM.

The following letter was received in response to a request to Bro. Rhone, Master of the Pennsylvania State Grange. It affords food for thought.

To give you an intelligent understanding of the progress made by our tax conference within the limits of this letter would scarcely be possible. Our struggle in this line extends over a period of ten to fifteen years, but it was in 1891 that a voluntary tax conference was formed upon the following basis: Agriculture was represented by five delegates from the State Grange; railroads by five; manufacturers by five; commerce by five; labor by five; county commissioners by five, all serving without compensation. Sufficient money, however, was raised jointly to do the clerical work and printing, amounting to about \$16,000. The convention was organized by electing president, vice-president, secretary and treasurer. Three committees were appointed at the first meeting, one to compile statistics showing the estimated value of each class of property and the amount of taxes paid, with the mill rate of each class. The value of real estate was ascertained from the county records by a special agent, who ascertained what property was valued at for the purpose of taxation, and what mill rate was levied. This was compared with the actual sale of property, exclusive of judicial sales and sales between descendants of families. By this method we were unable to determine the relative value of real estate as compared with assessments.

The value of corporate property was determined by adding to the cash value of the

stocks the cash value of the bonds as representing the true value of the property, then levying a horizontal mill rate. This is the basis upon which the bill is framed. Fraternally,
LEONARD RHONE.
CENTER HALL, PA.

THE EDITOR'S TABLE.

Making our Wants Known. The next two or three weeks should not go by without every Grange in Michigan making its wants known to the legislature. During that time every Grange will have an opportunity by petition to endorse the action of the executive committee of the State Grange at its recent session in Lansing. It is the bounden duty of every Grange to take some action; this question should be discussed and results made known without delay to senators and representatives in the legislature. We know very well by our experience of two years ago that these petitions carry weight, though we are sorry to say that two years ago not more than one-third of the Granges responded. Every Grange in the State ought to assist in this work. What is the use of co-operating if we don't co-operate? What is the use of howling at the legislature if we don't tell them what we want? The Grange offers an opportunity for farmers to make their wants known. Let us not be guilty of neglecting the opportunity and then curse the legislature and monopolists and everybody but ourselves for those things which we have lost because of our own neglect. There is no time to lose. This is important; let there be no delay.

The Jibb Bill. Last week the so-called Jibb bill, or the bill prohibiting the coloring of oleomargarine to resemble butter, passed the Senate by a nearly unanimous vote, only three members voting against it. There is no reason why this bill should not pass the House, and petitions favoring it should immediately be sent to members of the House. This is one of the strong Grange measures; it is fair and just and should go through.

Greedy Politics. Several weeks ago we protested as emphatically as we knew how against the likelihood of the removal of Mr. W. L. Rossman from his position as State analyst. We know that influential members of the Grangelike-wise protested, but it was of no avail. We do not know the man who has been appointed to this position. It is possible that he is just as competent as Mr. Rossman, but this is not a question of competency or personal feeling, it is a pure question of public good. The question is—shall a man occupying a post of work in the service of the State which demands scientific training and rugged honesty be subject to every political breeze? The mere question whether Mr. A. has this office or Mr. B. has it is of no consequence, but the question as we have stated it is of vital consequence. There is an important principle involved in the case of Mr. Rossman. Thorough training in chemistry, absolutely fearless honesty, and recognized capacity have been entirely ignored, as the change made is purely political. We regard this as a direct blow at our pure food laws, and through them at the Grange, which is standing back of these laws. We say again that the new incumbent may be perfectly competent, but that has nothing to do with the case. Unless charges of incompetency could be made and sustained against Mr. Rossman he should have been retained. Possibly some may think we have stated the case too strongly, but we believe it cannot be stated too strongly. For the present interests involved, great as they are, are not nearly so important as the vital principle involved; it is a disgraceful blow against capacity in public service.

Grange News. The length of our Grange news column is increasing in a gratifying way, but we need more news. We want to hear often from every Grange in the State; we want to know what you are doing, planning, thinking. Especially the latter. If you discuss an important topic, it is not of so much interest to us to know merely that you have discussed it; we want to know what you think about it. When the road question is discussed we want the correspondent not merely to say that the question was "ably discussed," but we want to know in a sentence what the prevailing opinion seemed to be, and the reason for it. If our correspondents will follow this plan

Grange news will be the most valuable feature of our department. Let us have plenty of Grange news each week.

THE KIMMIS BILL.

The above named bill is but the result of an effort on the part of the farmers toward a reduction in our county expenses.

Last spring Calhoun County Grange formulated a preamble and resolutions calling the attention of the Patrons throughout the State to the necessity of a concert of action in the passage of a State law whereby county officials should be paid a fixed salary, that each taxpayer might know just how much their county officers were receiving, and then compelling them under a fixed penalty to turn all fees and perquisites coming into each office over to the county treasury, to be used in defraying county expenses.

As the law is now, they not only receive their salary but all or nearly all the fees and perquisites coming into each office, amounting in many cases to more than their salary.

The bill introduced by Mr. Kimmis is the result of a demand toward lowering county taxes. It has been presented in the House and if ever a concert of action was necessary on the part of the taxpayers of Michigan it is on this measure.

It is absolutely necessary that each Grange in the State should express to their own senator and representative their attitude on the question, and the absolute need of the passage of this important bill.

Patrons, you must lend a hand, and let it be at once, now. When you have done all you can do, watch the vote.

MARY A. MAYO.

THE FARMERS OF MICHIGAN.

Much has been written of late in the MICHIGAN FARMER about co-operation and organization, or the Grange and farmers' clubs. They are very pleasant and sociable places to meet and talk. I am an old farmer, was a member of a Grange that, for lack of capital, co-operation, and because of the totally indifferent feeling of outside farmers, died a lingering death. My firm opinion is that not until the whole body of farmers is solidly united, will it ever accomplish anything beyond talk and resolutions. I am interested in reading the topics and subjects brought up for discussion by the different farmers' clubs and Granges, and notice on most subjects there is a divided opinion; scarcely two men think just alike. They meet, have a good time, speak their piece, and next meeting try something else, and appear satisfied to let it end there. It is so easy to sit in a room, think and write theoretical farming, but generally the gate is left open for the other fellow to put it into practice. Take a dozen farmers in any one township and you cannot get them to hang together for one year on a mode of buying and selling. Some want to "pay as they go," the others want the credit system. Independent of diversity of circumstances among farmers, there are natural reasons why they cannot work and act alike. The size of their farms, the difference in soils in close neighborhood, and the location and adaptation of crops are wide apart. To make the most money one cannot always follow in the tracks of the others, and like our bankers and brokers and political shysters, the farmers are not always strictly honest with one another. When the farmers are firmly united for the good of all we may look for better times, but it is one long look.

ALLEGAN CO. A. G. HYDER.

GOOD OF THE ORDER.

REPORT OF STATE GRANGE COMMITTEE.

Worthy Master, Officers and Members:

Your committee on good of the Order would respectfully submit to you for consideration its report on the following resolution introduced by Stanley McPherson:

Resolved, That the Michigan State Grange heartily endorses the action of the National Grange in urging the appointment of J. H. Brigham for Secretary of Agriculture.

Your committee recommend its adoption. Your committee also recommend that the State Grange have printed and send to subordinate Granges copies of the several reform measures introduced at this session, requesting them to forward petitions to the legislature for the passing of laws to remedy the wrongs.

We further recommend that the State Grange ask the MICHIGAN FARMER to publish the result of the vote on the different bills relating to our interests, giving the ayes and nays.

We heartily approve of the work of the tax statistician and hope the office will be continued, but would advise that immediate action be taken by this body to bring about a reform that will right some of the wrongs and inequalities existing to-day as pointed out by that efficient officer.

Realizing the necessity of a first-class farm journal, we would recommend that the members of the Grange give the MICHIGAN FARMER their support by a liberal subscription list. Believing it will be for the good of the Order, we recommend that each delegate on his return be urged to act as agent for the MICHIGAN FARMER and secure as many subscriptions as possible.

We endorse the action taken by the farmers' clubs recommending that the legislature vote no special appropriation to our State university.

The success of the Order depends wholly

on the energy of its members, therefore we advise individual efforts. Let each member live up to the principles taught in the Grange. Never lose an opportunity to tell your neighbors what the Grange is doing, and especially what the Grange has done for you.

We are proud of the work done by the Grange in the past, and would urge that all Patrons constantly bear in mind that our influence for good depends upon the freedom of our Order from partisan politics.

We would recommend that the proceedings of the State Grange be read in our subordinate Granges, and that the members inform themselves on the different important questions presented at this meeting.

Your committee have also had under consideration the report of the committee on woman's work and most heartily endorse the same.

Is it not true that no officer in the subordinate Grange is more important in fostering an interest in the educational and social features of our work than the lecturer? To him is largely intrusted the duty of determining the character and arrangement of our literary exercises, and since it is these features rather than the financial which chiefly attract the young, we hold that the utmost care should be taken in electing to this position the best talent for such work that the Grange affords. Nothing should be allowed to stand in the way of honoring by an election to this office him who can most readily appreciate and enter into the tastes and needs of the younger members of the community and win their cheerful co-operation in devising and presenting such entertaining and instructive programs as would most efficiently promote the welfare of the Order.

Your committee most heartily approve and hail with delight the creating by the State Board of Agriculture a department for our daughters, and would advise that the members of our Order patronize the same.

Believing that the success of the Grange depends largely on a good financial foundation, we therefore recommend that the subordinate Granges insist on the prompt payment of dues.

We recommend holding open meetings as an important factor in promoting the good of the Order.

We would again recommend that the subordinate Granges take advantage of trade contracts made by authority of the State Grange, and co-operate in any other other way that is practical.

Let us in the closing hours of this session renew our pledges of fidelity and have faith in its final success. Let us hope and persevere.

All of which is respectfully submitted.
W. H. SEITZ, JOSEPH DRISCOLL,
JOHN OVENS, MRS. EDGAR BROWN,
MRS. H. N. WEBB, ETTIE ROBERTSON,
M. H. FOSTER.

THE BUSINESS SIDE.

We as a Grange believe the business features of the Grange should be made prominent, and efforts should be made to enable the members to feel they are receiving financial as well as social and educational benefits. We have aimed to be and are large producers, and we have been learning to become such at the least possible cost; we should learn also how to dispose of our produce to the best possible advantage. It is one thing to produce but a far different matter to be able to dispose of our produce to the best advantage. We should learn to be good sellers. Every neighborhood furnishes examples of those who excel in this particular line of farm work, and it is the farmer who is successful in this direction who is the most prosperous.—C. A. Mace, in Kennebec, (Me.) Pomona.

\$5.50 COSTS NOTHING

To see and examine these suits, ALL FINE TAILOR MADE, style just like cut, guaranteed, and equal to suits made AT MORE THAN DOUBLE OUR PRICE.

\$5.50 For a \$12.00 Tailor Made ALL WOOL very stylish business suit, (any shade); Italian lined, satin piped, velvet arm shields, ELEGANTLY TRIMMED AND FINISHED.

\$5.95 For a Fine BLACK ALL WOOL CHEVROT SUIT.

\$6.50 For a regular \$15.00 Tailor Made ALL WOOL IMPORTED BLACK ENGLISH CLAY WORSTED SUIT. All suits \$4.00 extra.

OUR OFFER, send to us. SEND NO MONEY, state suit wanted, give your weight and height, state number inches around body at chest, taken over vest under coat, around body at waist, also at hips, and length of leg inside seam from tight in crotch to heel. IN FIVE DAYS we will send suit to you by express C. O. D., subject to examination. YOU EXAMINE IT at your express office and if found as represented—THE GREATEST BARGAIN EVER HEARD OF—pay the express agent our price and express charges. CLOTH SAMPLES FREE ON APPLICATION. Address, SEARS, ROEBUCK & CO. (Inc.), Cheapest Supply House on Earth, 82 to 96 Fulton, 73 to 87 Desplaines and 17 to 31 Weyman Sts., CHICAGO, ILL. Agents MAKE BIG MONEY selling our clothing (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

The Farmers' Choice IS THE SYKES Improved Iron and Steel ROOFING.

For all classes of buildings, easily applied, cheaper than shingles, will last a lifetime, and is absolutely fire and lightning proof. Reduces your insurance and is the best roof manufactured. Write for our handsome catalogue and mention this paper.

SYKES IRON & STEEL ROOFING CO., Chicago, Ill., or Niles, Ohio.

SIX MILLION PEOPLE VOTED FOR HON. W. J. BRYAN. His only book, "The First Battle," is now ready. Agents making from \$25.00 to \$150.00 per week; the greatest seller of the age; send for outfit quick. Beware of fraudulent books. W. B. CONKEY COMPANY, Sole Publishers Chicago.

When writing to advertisers please mention MICHIGAN FARMER.

CLASS' Water-Cleaned Seeds
Never Fail! Why?
Because the light seed is all washed out and what is left must grow. One trial will convince you. Catalogue and Garden Guide FREE.
Heman Glass, Seed Grower, Rochester, N.Y.
SPECIAL DISCOUNT ON APPLICATION TO
PATRONS OF HUSBANDRY.
Address as above.

RUMSEY'S ..NEW.. DOUBLE CYLINDER SPRAY PUMPS are BEST. The large air chamber gives ample storage for compressed air which will keep the spray going from 6 to 10 minutes after the pumps are stopped. They have agitators that agitate. Metal valves Plungers easily removed for packing, etc. Any farmer can do it. Write for full description and free book on spraying.
RUMSEY & CO., Seneca Falls, N.Y.

SPRAY with the EMPIRE KING
or BARFIELD KNAPSACK PERFECT AGITATORS. No scorching foliage. No leather or rubber valves. Twelve styles of Spray Pumps. Catalogue FREE. FIELD FORCE PUMP CO., 54 Market St., Lockport, N.Y.

SPRAY PUMPS
21 STYLES. BEST and CHEAPEST.
Catalogue and full treatise on spraying fruit and vegetable crops mailed free. Address
WM. STAHL, QUINCY, ILL.

Have you read about THE COMET \$2.50 to \$5.00. Beats them all. Don't buy till you see them. Send postal card for free cata. A harvest for agts, write today. H. B. RUSLER, Johnston, O.

CHOICE STRAWBERRIES FOR THE GARDEN AND FIELD. BARGAINS IN PLANTS FOR 1897. CATALOGUE FREE TO ALL.
C. N. FLANSBURGH, LESLIE, Michigan.

STRAWBERRY PLANTS, Small Fruit Plants and Vines. Best and cheapest for guaranteed stock. Plants grown from selected Pedigree stock. Improved varieties. Catalogue Free. Address **NAUVOO FRUIT CO., Nauvoo, Ill.**

SEED POTATOES. \$1.50 to \$2 per Barrel while they last. Write **W. E. IMES, SEED POTATO SPECIALIST, VERMONTVILLE, MICH.**

Beautiful Evergreens. Hardy and in great assortment. Splendid general nursery stock, including Shade & Ornamental Trees, Hedge Plants, Shrubs, Vines, Roses, Fruit Trees, Small Fruits, Etc. If you're wise you'll get our price before ordering elsewhere. Catalogue free. Evergreen Nursery Co., Evergreen, Wis. (Successors to George Pinney)

PRICES TALK. Apple, 4c.; Std. Pear, 5c. up; Peach, 2 1/2c. up; Plum, Cherry, etc., at equally low rates. Strawberry Plants, \$1.25 per M. up. Everything for the Fruit Grower. Healthy, true to name. The Best all Brass Spray Pump in the world, \$2.75. FARMER readers should write to-day.
NEIL, THE NURSERYMAN, Laporte, Ind.

RED RIVER VALLEY SEED POTATOES
Finest stock, best varieties, grown and stored in cold Northwest. Low prices. Small lots delivered free. Write for Illustrated Catalog. E. W. ALLEN, Wolverton, Wilkin Co., Minn.

FRUIT PACKAGES of all kinds. Also Beekeepers' Supplies. Now is the time to order and get the DISCOUNTS. Catalog and price list free. Address **BERLIN FRUIT BOX CO.,** Berlin Heights, Erie Co., Ohio.

Standards of America
NEW UNIVERSAL HAND GARDEN TOOLS
Success of 1896. Better for 1897.
Combination Seeder and 4 TOOLS! Double Wheel Hoe. BEST GOODS.
LATEST DESIGN. A dozen styles to select from. Write for circulars and address of nearest supply depot to
AMES PLOW CO., SOLE MAKERS, New York and Boston.

AGENTS WANTED **Cyclone Grass Seeder**
sows timothy, clover and all other seeds perfectly even, 60 acres a day. Saves 1/2 labor 1/2 seed. 200,000 in use. Send on trial. Special price and circulars free. **CHAMPION SEEDER CO., Urbana, Ind.**
MEN WANTED to Sell Clothing in every County, good wages, steady job, suits to order from \$5.00 to \$10.00. Samples free. **American Woollen Mills Co., Chicago.**

Mention Michigan Farmer when writing to advertisers

Successful

growers of fruits, berries, and all kinds of vegetables, know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

THIS ONE
MANUFACTURED BY
KELLY FOUNDRY & MACH. CO.
GOSHEN, IND.

GALVANIZED STEEL TANKS

STANDS UP!

No Leakage about.....
No Need of Repairing...
No Hoops to come off...
You will be Pleased with

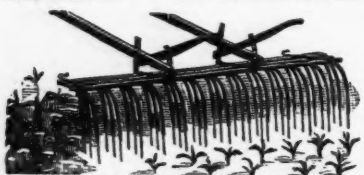
This One

A Tank that Holds Water and always ready for it.

Write for descriptive circular, rates, and do it now, because you may soon greatly need it.

KELLY FOUNDRY & MACH. CO.,
15 First Street, - GOSHEN, IND.

Farmers KILL WEEDS



With Hallock's Success Anti-Clog WEEDER AND CULTIVATOR.

Teeth Guaranteed. First Weeder in place at greatly reduced price. Write at once for terms and special price. Agents wanted everywhere.

D. Y. Hallock & Son
YORK, PA. P. O. Box, 809.

COMMON SENSE RACK.
Agents Wanted. The Best Combination Rack in Use.
Strong, Durable, Cheap.
Write for circulars and prices.
TECUMSEH RACK CO.,
Tecumseh, Mich.

FERTILIZERS.
Prepared Fertilizing Salt.
Hardwood Ashes. Big Crop Phosphate.
Fine Ground Bone.
Put Up in 100 and 200-lb. Sacks.
BONE AND SHELL FOR POULTRY.
Bone Meal. Granulated Bone.
Crushed Oyster Shell.
Oyster Shell Meal. Prepared Meat
Sample sack 100 lbs. Granulated Bone and 00 lbs. Shell sent for \$3.
Write for circulars and price list.
FITCH FERTILIZER WORKS
BAY CITY, MICH.

LOW Metal Wheels
with Wide Tires. Any size and width of tire wanted. Hubs to fit any axle. Saves labor. No resetting tires. Catalogue free. Address
EMPIRE MFG. CO., Quincy, Ill.

THE "GLOBE" MOWER

This is certainly the **SIMPLEST MOWER** now on the market. Little by little we have obliterated those complications so characteristic of mowers in general until we have produced the

"GLOBE"

which combines the **HIGHEST obtainable efficiency and simplicity.**

THE DRIVING GEAR is simple, powerful and durable. The high wheels produce **powerful traction and light draft.** Equipped with our **FAMOUS UNDER HITCH**, which applies the draft to the very centre of resistance.



THE GLOBE has a long pitman; all farmers know the power and advantage of a long lever. **Easy foot lift** carries the **cutter bar** over all obstacles—just the thing for rough land. The **grass end of cutter bar** is equipped with either wheel or sole—will cut **any height of stubble desired.** The knife end of the pitman has an oil reservoir which is self-feeding—no need of oiling every "round," and no danger of heating.

More about the **Simple GLOBE Mower**, and our **Bonnie Binder, Continental**

Mower, Continental Reapers, Globe Hay Rakes, Disk Pulverizers, etc., in our **FREE Catalogues.**

THE JOHNSTON HARVESTER CO., Batavia, N.Y., U. S. A.

BUCKEYE Parallel Spring Tooth Walking Cultivator

NO. 44

This machine is the same as our No. 46 **ADJUSTABLE ARCH CULTIVATOR** except that it is equipped with

Eight Spring Teeth

instead of shovels. The teeth work **parallel to each other** and are always kept **squared to the row.** The vibration of the spring teeth thoroughly fines and pulverizes the top soil, **killing all weeds and leaving a fine mulch on top, which destroys capillary attraction and preserves the moisture of the soil perfectly.**

P. P. MAST & CO., 4 CANAL ST., **SPRINGFIELD, O.**
BRANCH HOUSE, PHILADELPHIA, PA.

The narrow teeth make this a perfect machine for cultivating small and tender plants. It stirs every particle of ground without covering the plants.

A fine tool for **Market Gardeners**

You will get a much better idea of its qualities when you read our circulars of the full **BUCKEYE LINE** of implements—Free.

Idle Ground

Lack of time or lack of help is no excuse for uncultivated fields. The **"PLANET JR."** Farm and Garden Tools save time enough and furnish help enough to enable you to work all your land—and you'll get back in increased profits all the tools cost you. Every one of the score of "Planet Jr." tools is a labor-saver and a money-maker. The **"Planet Jr."** Book will give you valuable points on planting, hoeing—all kinds of cultivation. The 1897 edition is ready and free. Write for it. **S. L. Allen & Co., 1107 Market St., Philada.**

BREED'S UNIVERSAL WEEDER AND CULTIVATOR

AGENTS WANTED.

Ask Your Dealer For It.

Write for Circulars.

The UNIVERSAL WEEDER CO., BOSTON, MASS.

Recommended by John Gould, T. B. Terry, J. S. Woodward, Theo. Louis, W. I. Chamberlain, Waldo F. Brown, and every user.

49 So. Market St.,
BOSTON, MASS.

ASPINWALL POTATO-PLANTER

Successful record of fourteen years. Acknowledged King of Potato Planters. Better to-day than ever. Automatically marks, drops and covers in one operation, doing ten men's work.

Send for illustrated catalogue of Planters, Cutters, Sprayers, Sorters, etc., free.

ASPINWALL MFG. CO., 36 Sabin St., JACKSON, MICH.



HAVE YOU STUMPS TO GET RID OF?

HERCULES POWDER
WILL DO IT SAFELY, SURELY AND CHEAPLY.

ASK YOUR DEALER FOR IT, AND IF HE WANTS TO PUT YOU OFF WITH SOME UNKNOWN BRAND, SEND TO THE **HERCULES POWDER COMPANY,** Chicago, Ill., and Pittsburgh, Pa.

The Best Seed Potatoes, Farm and Garden Seeds

IN THE WORLD ARE GROWN BY
HARRY N. HAMMOND, Seedsman,
Largest Grower of Seed Potatoes and Farm Seeds in the World.

Decatur, Van Buren County, Michigan.

Northern Grown, Pure, True to Name.

These Michigan Grown New muck land Seed Potatoes planted on any soil in any climate produce earliest and largest crops everywhere. There can be on y one **BETTER** Hammond's Prize Seed Potatoes, Farm and Garden Seeds are not surpassed by any on earth. Prices are as low as the best quality of seeds can be sold.

MONEY MAKING FARM SPECIALTIES.

THE EARLY MICHIGAN POTATO.—There is no necessity of telling the readers of the MICHIGAN FARMER much about this celebrated potato. That it will be the leader in 1897 is conceded by all who tested it the past season. Without exception the Early Michigan is the earliest and most productive extra early potato ever introduced; its quality is not surpassed by any variety on earth. Peck, \$1.50; bushel, \$4; barrel, \$9.

Thoroughbred, Acme, Bur's No. 1, Uncle Sam, Carman No. 3, and all other varieties at reduced prices. Also Corn, Oats, Artichokes and Garden Seeds. **MICHIGAN WONDER OATS.**—The greatest White Oat ever offered the American people. Introduced by me last year. It outyielded 6 leading varieties the past season. It is one of the most profitable for the farmer to raise. With ordinary culture 75 bushels per acre can be grown. Bushel, \$1; 5 bush, \$4; 10 bush, \$7; 25 bush at 65 cents per bush.

I offer \$500 in cash prizes to club raisers. Full particulars will be found in my 1897 catalogue. A handsome illustrated catalogue with beautiful lithograph cover. Free to all interested in Seeds. Address
HARRY N. HAMMOND, Seedsman, Decatur, Van Buren Co., Michigan.

PULVERIZERS AND LAND ROLLERS



We manufacture a superior line of these goods. They are certainly a very valuable machine to every farmer. We also manufacture the famous **"LEHR" CULTIVATORS** and the **Lehr Bean Hog Troughs** and cast iron **Felloe Oilers.** Write for PRICES.

THE LEHR AGR'L CO., Fremont, Ohio.



These Rollers have New and Improved Features not shown in above cuts.

Buy Direct
and pay but one profit. Our assortment is one of the best and most complete in

Fruit and Ornamental Trees, Shrubs, Plants, Roses, Vines, Bulbs, Seeds.

Rarest New, Choicest Old.

Send for our catalogue today; it tells it all; an elegant book, 168 pages, magazine size, profusely illustrated—free. Seeds, Plants, Bulbs, Small Trees, etc., by mail postpaid, safe arrival and satisfaction guaranteed, larger by express or freight. 43d Year, 32 Greenhouses, 1,000 Acres.

THE STORRS & HARRISON CO.,
Box 342 Painesville, O.

Beans! Beans! Beans!

THE FIRST AND ONLY PRACTICAL BEAN PICKER FOR FARM AND WAREHOUSE USE.

Machines sent on approval. Send for circular.

BACON MFG CO.,
NATIONAL BLOCK, PONTIAC, - MICH.

The Only Patented Riding Wheel SPRING-TOOTH HARROW

A wonderful improvement.

The wheels carry the frame high above the ground, making it the lightest draft Harrow in the world. Ratchet tooth holder; 15 to 18 inches can be worn off the tooth. Over 4000 sold in 1896. A golden opportunity for dealers. Write for prices. We also manufacture Circular Saw Mills, Cultivators, Grain Drills, Engines, and all kinds of Agricultural Implements. Sold by all reliable dealers. Don't be deceived. Insist upon having our goods. **AGENTS WANTED.** Catalogue free.

HENCH & DROMGOLD, York, Pa.

SILOS
How to Build.
WILLIAMS MFG. CO., KALAMAZOO, MICH.

J. A. SPENCER, of Dwight, Ill., guarantees his BOX PRESS to bale THREE TONS MORE of hay in ten hours than any other make of two-horse press on the market, and his SMALL BALE PERPETUAL PRESS SUPERIOR to any other perpetual press. For CONDITIONS, CIRCULARS, etc., address as above.